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JOURNAL OF THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA

Vol. XV, 1916.

BERESFORD, PRINTER, 605 F STREET, N. W.
CITY OF WASHINGTON

CATALOGUED
JAN - 7 1916
G. C.

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Vol. XV. JANUARY, 1916. No. 1.

WASHINGTON MEDICAL ANNALS

PRESIDENTIAL ADDRESS, 1915.*

By Frank Leech, M. D.,

Washington, D. C.

Ladies and Gentlemen of the Medical Society of the District of Columbia:

When I assumed charge of this Society on January first it was with a feeling that I should do all in my power to make the year a successful one. As I look back and consider the work done by all for the good of the Society, and the results that have accrued, I feel more than satisfied.

A brief review of what has been accomplished will, I believe, not be amiss. The Executive Committee is to be congratulated on the excellent character of its reports to the Society, and deserves much praise for its arduous labors, which the great mass of the members fail to realize amount to anything more than perfunctory duty. A legislative sub-committee of the Executive Committee has been appointed and is being most watchful of all matters that concern the Society as a whole, especially as regards Congressional legislation. Certain things have arisen in the Executive Committee which make me feel that our Society does not hold the place it should in the minds of our legislators in Congress or the Commissioners of the District of Columbia. On several occasions our representatives have been refused hearings on affairs which directly concern the welfare of our members and our interest in medical legislation. If we are to be ignored in this way what chance have we to accomplish anything, as a body, in the making of laws concerning medicine? I feel that each member, individually, must, whenever the opportunity arises, impress on his or her friends, who hold legislative or official positions, the fact that our organization is a representative body and one which should receive consideration.

The Committee of Censors has done its work well, and the Society has thus been saved any acrimonious debate in regard to the admission of new members.

*Delivered before the Medical Society of the District of Columbia, Dec. 15, 1915.

The Committee on Publication has continued to do fine work, which a review of the MEDICAL ANNALS for the year will show. The question as to whether our Society should undertake journalism on a larger scale has frequently been brought forward. I am personally of the belief that there is no field for anything further in this line than our present publication. To enter this field would require the expenditure of a large amount of money. It would be a constant care and worry to those who had it in charge, and, in a body whose members are engaged solely in the practice of medicine, who would there be to give it undivided attention? And that is what it would need. I feel sure that it would be an undertaking which would not be of any particular advantage to our Society, and would not prove successful from a financial standpoint. Furthermore, the national journals, such as the *Journal of the American Medical Association,* supply all needs. I have heard it said that we did not even need the present publication, but I believe that to be a mistake. There are a number of our members who are frequently unable to be present at the regular meetings, who get a great amount of good from a perusal of its pages, and are able in this way to know what is being done by the Society, and also to gain much valuable information from the articles on medical subjects which our journal contains.

The Committee on Program is particularly to be congratulated for the excellent class of papers which have been presented during the year. With, possibly, one exception, they have been of the first order, and I am sure that no one could say that it has been green fruit. The papers presented by our out-of-town guests have been by men who are at the top of their specialties, although, again I will say, with one exception. One evening was devoted to clinical cases, and, from my point of view, was a great success. I would suggest that more meetings of the same character be arranged for the coming year. It has been suggested to me that it would also be advisable to have papers from time to time which would review the principal specialties in medicine and surgery. This was carried out in this Society a few years ago and was much appreciated. I would also submit this to the Committee on Program for its consideration.

Under Article IV (Meetings), Section 4, of the Constitution and By-Laws, it is provided that social sessions may be held. During the past year one smoker was given, at a cost to each member attending of $1.50. It seems to me that a committee might be appointed to consider the advisability of providing social entertainments of a less elaborate nature, at regular intervals during the year. Several societies, with a much smaller membership than ours, have carried this on successfully for a number of years. Our dues are small, and by the addition of, say, one

dollar per year, at least four smokers could be given. I believe this would add a pleasant feature to our already successful Society. "All work and no play makes Jack a dull boy."

During the year the statement was made to me that our Society was not anxious to extend any courtesies to members of the Army, Navy and Public Health Services stationed in and about Washington. In September I was selected by the Committee of Arrangements for the annual meeting of the Association of Military Surgeons of the United States, held in this city, to deliver the address of welcome on behalf of the Medical Society of the District of Columbia. In the course of my remarks I took occasion to make the following statement:

"As President of the Medical Society of the District of Columbia, which comprises a membership of over five hundred physicians and surgeons, engaged solely in the practice of medicine, I wish to state that, except in a very few individual instances, there is absolutely no foundation in fact for this opinion. Every medical man residing in the District of Columbia, if following the lines of regular medicine, is entitled to apply for either active or associate membership in our Society. At present every medical officer of the United States Army stationed in or near the District of Columbia is sent a notice of our regular meetings, and, I am glad to say that a number of them are frequent attendants, reading papers and taking part in our discussions. As soon as our sessions are resumed in October I propose, in addition, to have all of the officers of the Medical Corps of the Navy and of the Public Health and Marine Hospital Services, stationed here, notified regularly of our meetings, and shall expect to have them present whenever there are papers of interest to them on the program. I beg you to forget any trivial incidents which may have arisen in the past, and join with us in the future in our fight, and yours, for the prevention and cure of disease, both from a civil and military viewpoint. It is our aim to establish the best of relations between all the Services and our Society, as we feel that it will be reciprocally beneficial."

Since our sessions were resumed in October a regular notice has been sent to these gentlemen, and, I am glad to say that a number of them are with us at each meeting. Further, a number have applied for membership and been admitted, including the very distinguished Surgeon General, William C. Gorgas. I feel that it should be our aim always to be on the best of terms with these gentlemen, as a glance at the history of these Services will show that some of the best work in medicine and surgery has been done by men from their ranks. We can ill afford to do anything which might mar our now pleasant relations with them.

Your Special Committees have had little to do. I feel, however, that we are under great obligations to the Chairman of the

Committee on Public Instruction for his very excellent report of the meeting of the Committee on Medical Education, Legislation and Public Health, of the American Medical Association, held in Chicago in February last.

In view of the fact that these committees, except the Historical Committee, have no duties, I would suggest that they be discontinued, and that when matters arise which need special attention, committees be then appointed.

I feel that I should call attention to the hall in which we meet. It has for a number of years been thought that we should erect a building, with suitable quarters for scientific and social purposes. On several occasions subscriptions have been called for, but, for lack of financial support, the project has fallen through. It seems that this would be the ideal solution; but I am afraid that we should again meet with the same results as in former years, if it were tried. When we consider the poor acoustics, lighting, heating and seating arrangements of our present quarters, I feel that something should be done to improve conditions. The lack of space for lantern and moving picture machines is a great drawback, as those who were present at our last meeting can testify. I would suggest that a special committee be appointed in the near future, to consider this matter from every viewpoint, and report their findings at as early a date as possible.

During the year we have lost by death the following members: Drs. Ralph Walsh, Louis M. Babendreier, Louis Kolipinski, Ernest P. Magruder, George N. Perry, L. L. Friedrich, Warwick Evans, Charles G. Stone, John P. Dunnigan and Thomas Miller, active members, and General George M. Sternberg, honorary member.

There have been seventeen new active, five associate and one honorary member added to our rolls. Six members were dropped for non-payment of dues. Our total membership to date is 556 active, 27 associate and 7 honorary members, making a total of 590.

Our Society is one of which every member should be proud. Where is there another medical society which meets weekly, in which the interest is maintained as it is with ours? The average attendance at each meeting during the year has been in excess of one hundred. I esteem it a privilege to have had the honor of presiding over this body for the past year, and I wish to express my sincere thanks to one and all for the support that has been given me during the entire year. I wish to extend to our President-elect my best wishes for as pleasant and successful a régime as the one which I am about to relinquish.

As my preliminary remarks have been short, I wish to present for your consideration a paper on the subject of Scarlet Fever.

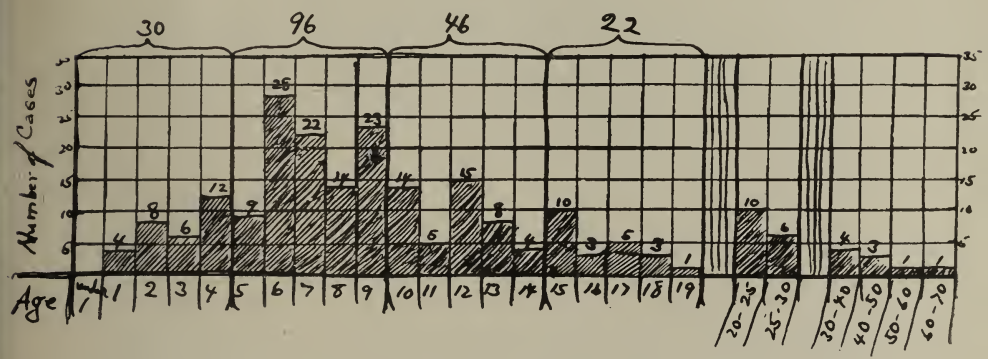
Scarlet Fever, with a Report of 220 Cases Coming Under My Care, During the Year Ending September 1, 1915.

Scarlet Fever is an acute, specific, infectious and highly contagious disease. It is self-limited and one attack usually protects the individual throughout life. The period of incubation varies from one to seven days, although occasionally we find the time as long as eleven days. Invasion lasts from twelve to twenty-four hours. Eruption covers a period of from four to six days. Desquamation lasts from three to seven weeks. It is characterized by fever, rapid pulse, sore throat, an erythematous rash, and a marked tendency to nephritis. It varies much in intensity. Attacks may be so mild as to go unrecognized, and again so severe as to prove fatal in a few hours.

The activity of the germ of infection varies in different years and in different localities. Some epidemics are characterized by their mildness and others by their severity. Dr. H. H. Donnally, in a recent paper, read before this Society, on Morbidity and Mortality in Scarlet Fever, has shown this conclusively.

Etiology.—It is essentially a disease of childhood, although it does occur in a small number of cases in those of mature years, one of my cases being a man of over sixty-five years. I had no cases under one year of age. Over 40 per cent. of my cases were between the ages of five and ten years. It is endemic in all

Age.—220 Cases.

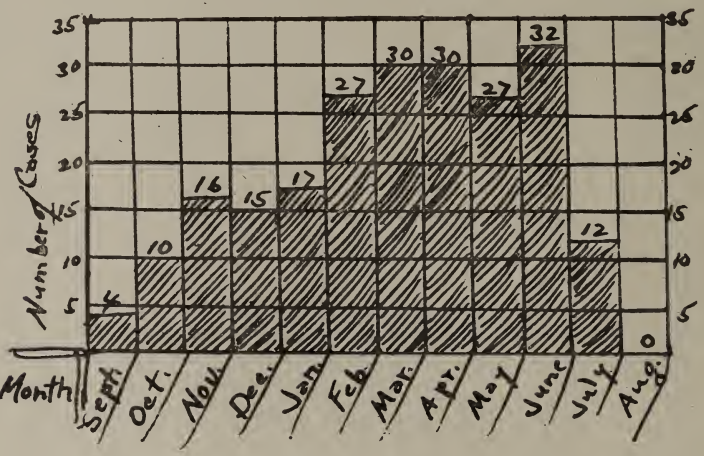


large cities and frequently epidemic in the fall and winter months, although in my series of cases February, March, April, May and June gave the largest number.

Until recently it was thought that the erupted and desquamating skin was the principal carrier for the transmission of the contagium. Even now the majority of physicians are unwilling to believe otherwise. They fail to consider that secretions from the nose, throat and ears contaminate articles that may be put

away indefinitely. In New York City a thirty-day quarantine is all that is required, if the secretions from the nose, throat and ears are entirely cleared up. The authorities absolutely ignore desquamation after that period and their record of secondary infections is less than when a longer quarantine was insisted on. I believe that it is now a well established fact that the skin does not spread the contagium except as it becomes contaminated by the secretions from the nose, throat and ears. The exciting cause of the disease has not as yet been definitely established. A great many observers believe that the streptococcus plays a distinct rôle, but the majority are agreed that this is secondary, the true germ not having as yet been discovered.

NUMBER OF CASES PER MONTH.—220 CASES FROM SEPTEMBER 1, 1914, TO SEPTEMBER 1, 1915.



There is no doubt in the minds of almost all that the secretions from the nose, throat and ears cause the spread of the disease. I believe that the secretions from the ears, where an otitis has existed, and also those from suppurating glands, are an important factor in the transmission of the contagium.

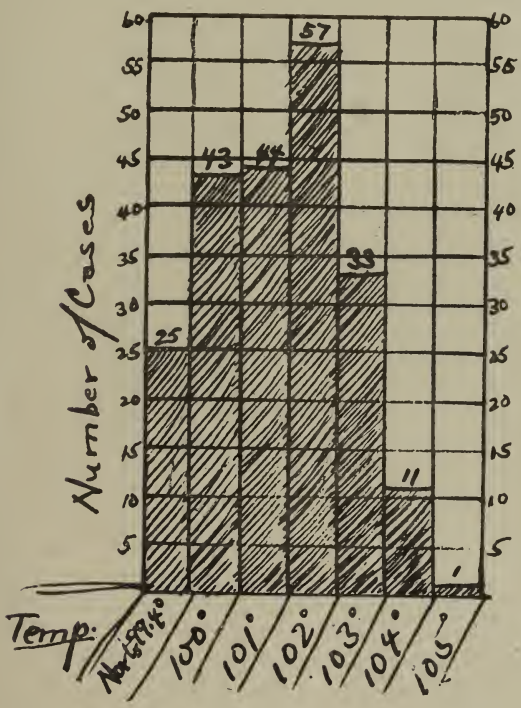
The streptococcus plays an important rôle in all complications. The disease is highly contagious and spreads rapidly, though not so fast as measles, or so widely. Infection is usually acquired through inhalation; sometimes through swallowing or wounds.

Several epidemics have been traced to milk from diseased cows. It is a question whether these cases were true scarlatina, or a scarlatiniform eruption, with septic sore throat, due to the streptococcus or staphylococcus.

Symptoms.—The invasion is sudden. Initial vomiting or nau-

sea, fever (in most cases an initial temperature of not over 102 degrees; 79 per cent. of my cases), sore throat, with pain on swallowing, swelling and tenderness of the glands at the angles of the jaw, and rapid pulse. On the second day, sometimes sooner, the characteristic rash appears, first on the chest and neck, then spreading rapidly over the entire body. The rash appears as a multitude of minute red points, set in a diffusely

TEMPERATURE AT ONSET.—215 CASES.



hyperemic and slightly swollen skin. On pressure over the hyperemic skin an anaemia is produced, which, when relieved, begins at once to show the petechial spots as the hyperemia returns. Rumpel, in 1909, described a test, which he claimed was diagnostic in nearly every case. The test is made as follows: A passive hyperemia is caused by a broad rubber band placed around the arm, just above the elbow joint, not sufficiently tight to obstruct the arterial flow. This band is loosened in about fifteen minutes, and the skin on the inner surface of the elbow joint, on being stretched until it appears anaemic, will show petechiae, if the reaction is positive.

Scarlet fever has usually been divided into three classes: mild, anginose and malignant. After seeing a great many cases of the disease, I have come to the conclusion that it would be better to divide it into four classes, viz: mild, anginose, severe anginose and malignant.

My classification is based on the fact that there is a marked difference in the anginose type of the disease. Many of this class of cases start out with a severe sore throat and a slight glandular involvement in the neck, which, in a few days, completely subside, with a subsidence of all other symptoms. The severe type starts much the same way; but, instead of a subsidence in a few days, the glandular conditions proceed to suppuration, the throat condition remains severe and the kidneys are apt to become involved.

Diagnosis.—The diagnosis of well defined scarlet fever is probably as easy to make as any of the so-called eruptive fevers. The initial nausea or vomiting, sore throat, fever of a mild or severe type, and the appearance of a pin point eruption on a hyperemic and swollen skin, can not be mistaken for anything else. On the other hand, the mild cases, where some of the cardinal symptoms fail to appear, are the ones which cause trouble. I am fully convinced that no case should ever be diagnosed scarlet fever, unless well defined throat symptoms are present. Many conditions will produce a scarlatiniform eruption, and, in the presence of an epidemic, will easily be mistaken for scarlet fever. Many cases will be seen where the rash is of an indefinite nature and the throat symptoms are overlooked. These cases are frequently not diagnosed until desquamation is established. Right here, I wish to make a plea for a routine examination of the throat of every child under the age of twelve years that comes under our care. It is surprising how frequently we find a diseased condition of the tonsils when we least expect it. Such examination often saves much embarrassment later.

The so-called strawberry tongue is by no means a constant symptom. I should say that we see more cases without it than with it. Kerley states that it is of little value, and that he has seen many other illnesses that have shown it. From my experience I can quite agree with him.

While one attack, as I have previously stated, usually protects through life, still we do occasionally see a second attack in the same individual. One of the fatal cases in my series was a well authenticated second attack. I have within the past month, seen a case in which there seemed to be no doubt of its being a second attack. The blood shows a leucocytosis, ranging from 10,000 to 40,000. So-called inclusion bodies were first demonstrated by Dohle, in the polymorphonuclear leucocytes, but are not to be relied on, as they are found in numerous other septic conditions.

Until a definite organism is found we will continue to have difficulty in making a definite early diagnosis, in many cases.

Complications.—The most interesting and dangerous features of scarlet fever are its complications and sequelae. In the 220 cases reported by me this evening, 66 had complications of a more or less serious nature, three ending fatally. These do not include the simple cases of albuminuria in the toxic stage, of which there were 31, making a total of 97, or 44.1 per cent. of complications.

The most important complications and sequelae are nephritis and inflammations of the serous membranes. The albuminuria found in the toxic stage does not preclude the development of a true nephritis later. Albuminuria during the early stages is, as a rule, not serious, and the great majority of cases clear up within a few weeks. Those cases coming on during the third and fourth weeks are the ones that prove serious and usually cause a protracted convalescence. The onset in these cases may come on gradually; or suddenly (without oedema), and very pronounced symptoms, as convulsions, suppression of urine and high temperature. Septic nephritis, as a part of a general pyaemia, sometimes occurs. Oedema, without any kidney lesions, is sometimes found, the result of an impoverishment of the blood. Chronic nephritis rarely develops out of the acute condition; but, for a long time, a tendency is left for such development, under favorable conditions.

In my cases there were only 31 instances of simple albuminuria, and only 2 of post-scarlatinal nephritis, both of which recovered. Otitis media and mastoiditis are responsible for much of the deafness in after years. I had 13 cases of otitis media and 3 of mastoiditis, all of which recovered. Arthritis is a not uncommon complication; 7 of my series showed this condition. Arthritis is to be differentiated from simple joint pains, which are very common and have not been noted in my reports.

Cervical adenitis is almost invariably present in the mild and severe anginose types. In the severe anginose type suppuration of the glands is the usual result. There were 8 cases of this variety in my series.

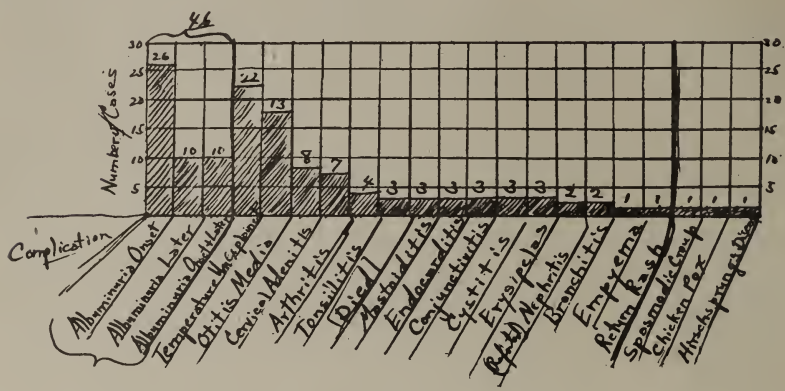
Endocarditis, both simple and malignant, may occur. My 3 cases were of the simple type and all recovered.

Conjunctivitis occurred in 3 cases, cystitis in 3, erysipelas in 3, bronchitis in 4, tonsillitis in 4, elevated temperature unexplained (of a type lasting from two to four days) 22, and empyema 1 case, which resulted fatally.

The causes of death in the other 2 cases were general sepsis, in a severe anginose case, and a septic nephritis, with uraemia, in the other. Concurrent infections are not infrequent, espe-

cially diphtheria, chicken-pox, measles, pertussis, erysipelas, etc. At this time I have 2 cases in which chicken-pox has developed, without any known exposure.

COMPLICATIONS.



Diphtheria did not occur in any of my series of 220, although, at this time, I have two cases with the disease as a concurrent infection. Cultures were taken from every case on admission, and all were found to be negative. A Schick test was done on thirty patients, varying from the first to the forty-first day of the disease. Twenty were positive and ten negative. I believe the Schick test to be an excellent procedure, especially in institutions where large numbers of cases are taken care of. It will determine who should have antitoxin; and, in those with clinical evidence of the disease, how much. This means a great saving, financially.

I have taken an average of 208 cases, as to the number of hospital days, and find it to be 42.06 days. This is where I feel that the rule of keeping every case in quarantine until desquamation has entirely ceased, is bad, not only for the patient, who could be allowed to be in the open air and sunshine much sooner, but from an economic viewpoint. While I believe in proper regulations for quarantine, still, I am firmly convinced, that, in the District of Columbia, some change should be made in this regard. Think of the number of hospital days that would have been saved. Calculated roughly this would have been a matter of over $2,500.00, at a rate of $1.00 per day, for maintenance, based on a 30-day quarantine. Furthermore, it would have given room for other patients, who had inadequate attention at home, and were, unquestionably, a far greater menace than those who would have been released from quarantine. If we do not believe that

the skin disseminates the contagium, an indefinite quarantine dependent on desquamation, is certainly not justifiable.

Number of days in hospital for uncomplicated cases, and cases with albuminuria only.—148 cases; average, 40.98 days, or, 5 weeks and 5.98 days.

Number of days of fever to normal temperature.—208 cases; average, 4.81 days.

Diphtheria.—Throat culture taken from every patient on admission. All negative.

Schick test, done on 30 patients, varying from 1st to 41st day of disease of scarlet fever.—Positive, 20 = 66.66 per cent.; negative, 10 = 33.33 per cent.

Treatment.—Strict isolation, the kidneys, diet, the fever, the skin, the throat and nose, and, later, complications and convalescence, are the headings under which treatment should be considered.

I do not propose to go into the details of treatment at length, as you are already thoroughly familiar with them. All cases should, of course, be strictly isolated from the beginning, and kept so until all symptoms are entirely cleared up, except desquamation, which, as I have already stated, I consider a negligible factor in the transmission of the contagium.

A systematic examination of the urine should be made; and, if albumin appears, the patient should be most carefully watched. Even though it clears up quickly, it should still be kept well in mind, for fear of later developments of a more serious nature. The diet should consist of milk, or things made from milk, during the continuance of the fever, or in the presence of kidney complications. After the subsidence of the fever, it is well that the diet be of a bland, unirritating character for several weeks.

The skin should be kept bathed at frequent intervals; and, during desquamation, well oiled, to hasten peeling.

The throat and nose should be sprayed or swabbed with alkaline solutions every few hours. A preparation which we use as a routine measure for application to the tonsils and pharynx, is a 12½ per cent. solution of iodine in glycerine.

Patients should be kept in bed for at least one week after the temperature has reached normal, and longer, if kidney complications are present.

Treatment of complications.—The treatment for these conditions is the same as for similar ones when not complications of scarlet fever.

The vaccine and serum treatment has as yet not shown anything definite. However, L. Axenow, a Russian, reports the use of an autogenous vaccine in the severe cases where the streptococcus was found in the blood. His claim is that it is the only thing that will save the bad cases. The Germans, Reiss, Jung-

man and R. Koch, report good results from the intravenous injection of serum from convalescents. Abraham Zingher, at the Willard Parker Hospital in New York, working on the ground that about 60 per cent. of the blood is wasted by this method, has been using the whole blood, injected intra-venously and intra-muscularly. While he has not had a sufficient number of cases to make any deductions from, as yet, still it opens up an interesting field. When the organism, which is the cause of the infection, is eventually found, we can then look for a vaccine, which will probably be the means of curing the greatest percentage of all cases.

Conclusions.—1. That scarlet fever is an infection, the organism of which has not as yet been isolated.

2. That an organism is unquestionably the exciting cause, is shown by the definite results that have already been obtained by intra-venous and intra-muscular injections of whole blood from convalescents from the disease.

3. That the infection is not transmitted by the scales, except when contaminated by secretions from the nose, throat or ears.

4. That quarantine regulations, depending entirely on desquamation, are a relic of the past and should be changed to be in accord with present-day teachings.

5. That no specific treatment has as yet been found.

I wish to express my great appreciation to Dr. L. H. Smith. one of the House Officers at the Garfield Memorial Hospital, for his interest in tabulating these cases; and for the charts which I have shown this evening, without which my remarks would have been far less to the point. Also for doing the Schick reactions.

Dr. Claytor was much interested in the paper; Dr. Leech, with his exceptional opportunities for seeing scarlet fever cases, might be regarded as knowing as much about this disease as any man in the District of Columbia. With regard to the period of quarantine, Dr. Claytor had developed some rather strong convictions as a result of his own recent attack of scarlet fever; in 21 days he was perfectly well, and had nearly completed peeling. The important point is to determine whether there are any remaining catarrhal manifestations. Of course, the most convenient method to set the limit of quarantine is by the duration of desquamation, but it surely is not the best. He had had the courage of his convictions to the extent of bringing his children home on the 24th day.

Dr. Wall wondered how long it would take for a horny footed negro to complete peeling. Desquamation has its uses in the control of scarlet fever, however, as was indicated by a recent case which was unrecognized until desquamation began.

Dr. Woodward could fully sympathize with Dr. Claytor in his objections to long quarantine. Dr. Woodward had had similar experiences in his own household. All scarlet fever patients feel strongly on this subject. Notwithstanding the opinions expressed, no evidence had been brought forward to indicate that at the end of 30 days a scarlet fever patient is no longer a menace to others; on the other hand, the Health Department is at present threatened with suit because a secondary case developed four days after a patient had been discharged from quarantine by the department; this was a thirty day case, too. It must be admitted that the English statistics show that their secondary, or, as they call them, "return" cases occur with about the same frequency as in other countries. The fact is that we have no way of knowing when the infectiousness of scarlet fever ceases; the tendency is to scout the infectiousness of the scales, but the cessation of desquamation is a convenient way to fix the end of quarantine. If the Medical Society can fix upon a better or a more scientific way to determine the quarantine period for scarlet fever, the Health Department would certainly consider such a suggestion very seriously.

Dr. Chappell said that it seemed to him hardly advisable to undertake to determine upon any new procedure for the control of scarlet fever until we know the actual cause of the disease. He was inclined to believe with the other speakers that the scales are not infectious, but in the present state of knowledge we can hardly do better than to be guided by this process. Probably the secretions of the nose and throat are the real carriers of the contagion; he was under the impression that he had first suggested that idea in this Society. The differential diagnosis of scarlet fever is most difficult; he would feel relieved if he could conclude as definitely as had others that non-anginose scarlatiniform rashes are not scarlet fever. He had recently had two cases with such trivial throat symptoms that he had hesitated over the diagnosis, and had been unable to conclude that they were not scarlet fever until supported by the opinion of a consultant.

Dr. Masterson had scarlet fever himself a year or two after beginning practice; the eruption was very slight and it was believed that he had tonsillitis, until after twelve or fifteen days he began to desquamate. In the interval he had not been quarantined, and although he had mixed freely with the people in a large boarding house, he knew of no secondary cases arising from contact with him. He had looked up the subject of the control of scarlet fever a few years ago, and had found that in a number of the English hospitals, scarlet fever patients are discharged at the end of twenty-nine days regardless of the stage of peeling. Their results as regards secondary contact cases are equally as good as in other communities where quarantine is prolonged to 42 or 62 days.

Dr. Frankland said that the discussion recalled a conversation in which a friend related how after scarlet fever he had put his children in a borax bath, and got through with desquamation all at once; this procedure had been advised by a homeopathic physician.

Dr. Hunt said that much had been said as to the justification of continuing quarantine through a tedious desquamation, but if we use the disappearance of catarrhal symptoms as a criterion, we encounter those obstinate cases of discharging ears which may be as interminable as desquamation. He had kept such children in quarantine for a period of ten weeks, and had finally had to discharge them on the opinion of the aurist. He had not known of any secondary cases growing out of this practice.

Dr. Glushak said that mention has been made of the practice at certain English hospitals of discharging scarlet fever cases at the end of a fixed period irrespective of the stage of desquamation. It might be of interest to state that the city of Glasgow, which has a population of 1,000,000, and which has had many epidemics of scarlet fever, maintains a hospital for contagious diseases, and the scarlet fever pavilion is surrounded by a high wall. The patients are not released before desquamation is entirely over; they are then scrubbed thoroughly and sent out with fresh clothing. If complications have occurred, the patients are kept until well.

Dr. Williams said that there are some interesting analogies between scarlet fever and epidemic poliomyelitis: they both seem to convey the infection by means of mucous discharges of nose and throat; the infective organism is not known; and secondary cases may follow six months after the first outbreak, although there is a prevalent idea that the infectivity of the two diseases is short. May not the greater prevalence of these diseases in childhood be accounted for in part by the fact that adults are cleaner in their habits, and particularly have contracted the clean nose habit.

Dr. Macatee said that whatever may be the facts as to the infectiousness of scarlet fever scales the practical fact remains that when several cases of scarlet fever arise in a given room of a school, close inspection will generally disclose a peeling child in that room. Although he was inclined to the view that the scales are not infectious *per se*, any change in the policy of regarding the existence of desquamation as evidence of continued infectiousness of the individual would seriously handicap a medical inspector of of schools in the control of scarlet fever.

Dr. Leech said that there was abundance of direct evidence that scarlet fever scales are not infectious, unless contaminated by secretions from nose or throat. The 30 days' minimum quarantine of the New York Department of Health had been decided upon only after careful study of a great mass of evidence bearing on this matter. He would not advocate the discharge of scarlet fever patients at the end of thirty days, if nose or throat

discharges persist. As to throat symptoms, he believes there is a distinct angina in every case of true scarlet fever. He was skeptical as regards the essential value of disinfection of premises by fumigation; the free admission of sunlight and fresh air is a much more important measure. There are many inexplicable caprices observed in the transmission of scarlet fever; he instanced a family in which there had been five successive cases of scarlet fever in four different localities; there must have been a chronic carrier in this family, but what factors operated to cause the peculiar spacing of the cases could not be determined.

THE ARMY MEDICAL MUSEUM.—A HISTORY.*

By D. S. Lamb, A. M., M. D., LL. D.,

Washington, D. C.

On the 10th of February, 1915, on motion of Dr. A. B. Hooe, I was requested by this Society to prepare and read a paper before it, on the subject of the "Army Medical Museum and Library." The compliment I appreciate very much, but so far as the Library is concerned, I must ask to be excused. The one to do that part is Dr. F. H. Garrison, who, as well as Drs. Billings and Huntington of the Army, had already written up the Library in a brief way.

With regard to the Museum I had long contemplated making a collation of the more interesting facts in regard to it and had made some memoranda, intending that the work should be a permanent record for reference. I talked the matter over with the Curator, then Major E. R. Whitmore, of the Army Medical Corps, who approved it, and during the leisure of the summer and early fall I proceeded with the preparation. The results make a record of some size, and for the purpose of the talk this evening I have made a sort of summary.

I may state here that this day, Nov. 3, 1915, is just fifty years since I was assigned to duty at the Museum, Nov. 3, 1865. Through many administrations, many other persons have come and gone while I am still in the harness.

The credit for the inception of the Army Medical Museum seems to be due to Dr. Wm. A. Hammond, Surgeon General, U. S. Army. He was appointed Surgeon General April 25, 1862, and on May 21, less than one month after his appointment, he issued a circular to the medical officers of the army, in which he stated that it was the intention to establish such a Museum and directed them to send to his office specimens of morbid anatomy, medical and surgical, and projectiles and foreign bodies removed from wounds.

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* Read before the Medical Society November 3, 1915.

While it was possible and perhaps probable that the idea of such a museum should occur to other army medical officers, especially in view of the fact that there was a military medical museum at Netley in England, and another at Val-de-Grace in France, it still seems to be due to Dr. Hammond that the Museum was established; and the credit has almost without exception been given to him. The first Curator, Dr. J. H. Brinton, a Surgeon, U. S. Volunteers, distinctly gives Hammond the credit, and was in a position to know.

Dr. Brinton was appointed Curator June 4, 1862, just two weeks after the issuance of the circular named. On that date he was assigned to duty in the Surgeon General's Office and appointed Curator of the Museum; and a few days afterwards, June 9, he was designated to prepare the surgical part of the Medical and Surgical History of the War of 1861–5. At the same time Dr. J. J. Woodward, Asst. Surg., U. S. A., who had also been assigned to duty in the Surgeon General's Office, was designated to prepare the medical part of the same history.

It should be added that not only did these officers and their successors attend to the duties named, but they were called on from time to time to attend to many other duties besides those of the Museum and the preparation of the History of the War.

Already there was a nucleus of a museum in half a dozen specimens that had at odd times found their way to the Surgeon General's Office. Besides this it became known that some medical officers were preserving specimens for their own use. It may be that this fact had some influence in determining to establish the Museum.

Events moved rapidly. July 28 the Surgeon General sent a number of medical officers to some of the military hospitals to collect such specimens as had up to that time been preserved, and a few days later, August 1, he directed Brinton to make the collections and have them properly arranged. It seems probable that the Surgeon General had become satisfied that his order to send specimens to his office was being to some extent evaded, and that specimens, as previously stated, were being preserved for the personal use of some medical officers.

At this early period the collection, being small, was housed in rooms in the office of the Surgeon General, which was then located in the back and upper part of the old Riggs Bank Building, at the corner of 15th Street and President Place, northwest. [This building was later torn down and replaced by the present one.] Sometime afterwards these rooms were turned over to the medical Inspector General, and Drs. Brinton and Woodward and the specimens were transferred to a building on Pennsylvania Avenue, west of 17th, north side, numbered 180. The number is now 1719–21.

After the battle of Antietam in September, 1862, Dr. Brinton

was sent to Frederick, Md., to collect specimens; Dr. W. W. Keen of Philadelphia was then on duty at the hospital at Frederick, and aided in the collection.

In December, also, after the battle of Fredericksburg, Brinton, accompanied by Dr. Wm. Moss, Asst. Surg., U. S. Vols., and Assistant Curator of the Museum, went to Fredericksburg and collected many specimens.

By the first of January, 1863, in the few months that the collection had been made, it had reached a total of 1,349 specimens, and consisted of 985 surgical, 106 medical, 133 missiles and 125 miscellaneous. A catalogue had been compiled by Dr. Moss and was published. This publication, in which credit was given by name to the contributors, is said to have increased the interest in the Museum and stimulated contributions.

The first preparator was a man named Fred Schafhirt, who was born in Germany and was said to have served as preparator to the eminent surgeon, Langenbeck, and, according to Dr. Otis, also served Blumenbach, the distinguished German physiologist. Schafhirt came to the United States and became assistant to Professor Joseph Leidy, the eminent anatomist, for a long time Professor of Anatomy at the University of Pennsylvania. Dr. Otis also says that Schafhirt assisted Prof. George Morton, the author of the "Crania Americana." Schafhirt was assisted at the Museum by his two sons, Ernest and Adolph. Schafhirt was not a graduate in medicine but was generally called Doctor. His strong points consisted in the fact that he had had a long training in preparing specimens and had acquired much information about human and comparative anatomy. The fact that Brinton and Woodward and Hammond also were all from Philadelphia explains in part the selection of Schafhirt as preparator. He was a steady worker and, as testified by Woodward, his work was satisfactory.

The specimens as received at the Museum were but roughly prepared and needed further attention, which was given by the Schafhirts, and after being properly mounted, were labelled and the proper records made by the clerks detailed for the purpose. These clerks were at that time enlisted men, Hospital Stewards in the U. S. Army. The work of preparation was so great, due to the large number of specimens received in relatively a short time, that it could not possibly be thorough, and for a long time the bone specimens were troubled by insects, that fed on the remnant of the softer organic matter in the bones. The Museum shelves became untidy from accumulations of debris. The trouble was met by the generous use of camphor, which, as it volatilized in the cases, killed the insects. Still later the Persian insect powder was used. When the "rush" was over, and there was time to do the work more thoroughly, the trouble ceased.

The wet specimens were then and for a long time afterwards preserved in alcohol. This alcohol was distilled at the museum

from whiskey and other alcoholic liquors, that from time to time were seized by provost marshals and other army officers under circumstances that called for their condemnation. The liquors were usually turned over for storage to the medical purveyors, and much of the stuff was then sent to the Museum for the preservation of specimens. The strength of the alcohol used for preservation was about 70 per cent., a little higher for nerve tissues. It was a simple matter to change the fluid on specimens and recover the alcohol by redistillation. The museum was not compelled to buy alcohol for preserving specimens, for many years, the quantity of confiscated liquors was so large.

Other preservative liquids have from time to time been tried, but although the objections to alcohol were particularly that it decolorized and shrunk the specimens, it was altogether the most satisfactory preservative, and its use was continued until the formula of what is known as the "Kaiserling" process was published, after which the use of alcohol was almost entirely discontinued except as part of that process. With some modification, the Kaiserling process has been used with much satisfaction for wet specimens since June, 1897. Specimens prepared by this process were originally intended to be kept in the dark, but of course this would not answer for a museum.

May 21, 1863, Brinton was again ordered to go to the Army of the Potomac to collect specimens. By this time the collection had outgrown its accommodations, and Brinton looked about for some other and more suitable place. He found a place on H Street, Northwest, between 13th and 14th, north side, in a building occupied by a school, and generally known as the Corcoran schoolhouse, because it had been built by a Mr. W. W. Corcoran, a well known banker of Washington, who had at one time been associated with the Riggs bankers. May 22, the Secretary of War, E. M. Stanton, ordered that the building be turned over to the Medical Department of the army for the use of the Museum. The school, however, was permitted to finish its term; the building then was altered for Museum purposes, and in the following September the collection was transferred to it.

In the meantime, after the battle of Gettysburg, July 1 to 3, 1863, Brinton and Dr. Schafhirt went there to collect specimens and Schafhirt packed two barrels full and sent them to Washington. It may be mentioned that General Daniel E. Sickles was shot in the leg at Gettysburg; his leg was amputated and by his direction sent to the Museum, where the bones were prepared and mounted as number 1335 of the pathological series. From time to time for some years the General dropped in at the Museum to see his remains.

In August, 1863, a lot of specimens was received from the hospitals in Louisville, Ky., and during this month a number of boxes containing cans and with lock and key, were sent to hospitals for collections; the preservative furnished was whiskey.

The presence of the Museum collection and of many of the younger army medical officers in Washington, suggested to Brinton and others that it would be a good idea to establish an Army Medical School, utilizing the Museum collection for a series of lectures on military medicine and surgery, in the Museum building. Application for permission was made to the Surgeon General (who at this time was Dr. Joseph K. Barnes, also of Philadelphia, and designated as *Acting* Surgeon General, in place of Dr. Hammond). The application was referred to the Secretary of War, who disapproved it, and thus this first effort toward an Army Medical School came to nought. Among the medical officers who had offered their services for the school were Brinton, Woodward, Roberts Bartholow, D. W. Bliss, John A. Lidell and Wm. Thompson. The latter became a well known ophthalmologist in Philadelphia.

In December, 1863, a box of specimens was received from Vicksburg, Miss. Sometime in the winter of 1863–4 a Russian fleet came up the Potomac and anchored at Alexandria, Va., because of the insufficient depth of water at Washington. I remember the fleet. I was then stationed in Alexandria. One of the surgeons of the fleet visited the Museum and some time afterwards published an account of his visit. He was especially interested in the shot fractures, and spoke approvingly of the illustrations that were to be used in the History of the War; also of the microscopic slides and the Indian weapons; he doubted if the specimens preserved in alcohol would eventually prove valuable, because they would lose their color and other features.

About February, 1864, the collection of hospital records that contained the detailed histories of surgical cases, and the clerks working with them, were formed into a Division of Surgical Records, under the charge of Brinton. At this time also Dr. E. M. Curtis, Asst. Surg., U. S. A., was assisting Dr. Woodward in the microscopic work. Later Dr. Moss, the Assistant Curator, resigned and was succeeded by Dr. Brinton Stone. August 20 Dr. Hammond was dismissed from the Army. It is only just to him to state that many years afterwards he was restored to his former rank and retired with that rank. July 22 Dr. George A. Otis, Asst. Surg., U. S. Vols., was assigned to duty to assist Brinton, and Sept. 29 Brinton was relieved from duty in the Surgeon General's Office and as Curator of the Museum, and ordered to Louisville, Ky., for duty; and Otis took his place. About this time, also, Dr. Ralph Walsh, of Washington, was assigned to duty in the Museum.

In the latter part of the summer a photographic section had been added to the Museum. It was now desirable to rearrange the work and Otis was definitely placed in charge of the Surgical and Photographic sections and of the Division of Surgical Records, and to Woodward was given the charge of the Medical and

Microscopical sections and the Record and Pension Division; this latter was composed of clerks and the records of hospitals, &c., used by the clerks in searching in the case of individual soldiers for evidence of disease or injury to establish, or not, claims for pension. At this time the Museum collection contained 3,500 specimens and about this time Woodward began to do photomicrographic work, assisted by Curtis.

In December, 1864, a series of specimens was selected to be forwarded to Paris for exhibition at the Paris Exposition of 1867.

By the end of the year a further subdivision of sections of the Museum was made; to Dr. Otis' charge were added an Anatomical and a Miscellaneous section; and to Woodward was added a section of Comparative Anatomy.

The photograph section, from the beginning, has been extensively utilized. One instance may be mentioned, namely, that after the assassination of President Lincoln, 1,500 photographs of those who were charged with conspiracy to assassinate were made by this section for the use of the Department of Justice. It may be added that in March, 1866, thieves broke in one night and stole about $500 worth of photographic apparatus and material. At the present time the section includes about 11,000 negatives besides nearly 1,400 photographs.

Nov. 3, 1865, I, who was then a hospital steward, U. S. A., was assigned to duty in the Museum as assistant to Woodward. Woodward had several other assistants, Dr. S. S. Bond of this city was one; and two others besides Curtis were doing microscopic work, namely, Dr. J. C. W. Kennon and Dr. E. M. Schaeffer, then a hospital steward. With Dr. Otis was Dr. A. A. Woodhull, Asst. Surg., U. S. A., who was compiling a catalog of the Surgical Section, and also Dr. John Stearns.

The attachés of the Museum have made many post mortem examinations at the hospitals in Washington, and also outside the hospitals, for army medical officers and private physicians. The object has been to acquire specimens for the Museum collection, and it will be understood, therefore, that there has been little or no compensation for the work. In 1865–6 a series of 100 examinations was made at the Freedmen's Hospital, Washington, by Stewards Adolph Schafhirt and Bond and myself. After an interval of several years I resumed this work at the hospital and continued it until a few years since, when the hospital was provided with a pathologist. In all, up to date, the attachés made about 1,500 examinations, over 1,300 of which have been recorded in detail. Some of these have been made on persons of greater or less celebrity or notoriety, as the case may be; for instance, on President Lincoln and his assassin, Booth; on President Garfield and his assassin, Guiteau; on Vice Presidents Henry Wilson and George Clinton. And I may add that at Freedmen's Hospital I examined George Washington, Patrick Henry and Daniel Webster.

It is only fair to say that on many occasions, especially before the days of antiseptic surgery, infection was acquired as well as specimens, and attended with more or less serious illness and with more or less troublesome sequelae. I have been through a number of illnesses of major or minor seriousness. It is not, therefore, a matter of surprise that an infection from one case, in which cultures showed the presence of both the meningococcus intracellularis and diphtheria bacillus, put me to bed and was followed by a persistent partial deafness.

In the *Atlantic Monthly*, July, 1866, appeared an article by Dr. S. Weir Mitchell, entitled "The case of George Dedlow," purporting to be an account of an army officer who had been shot so that it became necessary to amputate in both arms and both thighs; it was said that the amputated legs had been deposited in the Museum, numbered 3486 and 3487. The story was a fiction, but was based on a case which Mitchell had read of. However, there was no case of quadruple amputation reported during the war; after the war a case was reported following frostbite.

After the assassination of President Lincoln, the place of the tragedy, Ford's Theater, located on Tenth Street, Northwest, between E and F, east side, and then numbered 454, was closed by order of the Secretary of War. Congress appropriated money to buy it and alter it for Museum purposes. When the alterations were completed, late in the year 1866, the Museum collection was removed thereto. The Division of Surgical Records and Record and Pension Division were also installed there, and both the building at 180 Pennsylvania Avenue and that on H Street between 13th and 14th were vacated. The latter was occupied at once by the National Medical College; the building was later torn down and the present one erected. The chemical laboratory of the Surgeon General's Office was also established in the new quarters on Tenth Street. These new quarters, besides the main building, had both a northern and southern annex; the chemical laboratory occupied the first floor of the latter; the upper floors were occupied by Woodward and Otis. The Record and Pension Division was on the first floor of the main building, the Division of Surgical Records on the second, where also were several small rooms used by Woodward for the pathological and microscopical work and later for microphotographic work. On the third floor was the Museum collection. In the north annex, which was at the back on an alley, were the photographic rooms and those used by the Schafhirts for their work. Some distance away from the main building in the alley was a two-story building, formerly a stable, and bought from Dr. A. Y. P. Garnett of this city, which was used by the carpenter, and for redistilling alcohol. Although the main building was considered fireproof, the annexes were not, and the roof was not; besides which, on the south side especially,

were sheds belonging to houses on E Street, which were a continual menace, and at length, January 1, 1875, one caught fire and the fire extended to the Museum, doing, however, little damage; it was extinguished almost entirely by Museum employees who happened to be present, although it was New Year's day.

It is an interesting reminiscence to me that the part of the Museum assigned to and occupied by me for the next twenty-one years, was a part where had been the box in which President Lincoln was assassinated.

The catalog of the surgical section of the Museum, prepared by Dr. Woodhull, was published this year, and the next year two more catalogs were published; the medical section prepared by Woodward and the microscopical by Curtis.

From time to time the Surgeon General issued circulars in regard to medical officers sending specimens to the Museum. This action seemed necessary to keep the matter in mind. One was issued April 4, 1867, in which specimens of Indian archaeology especially were requested. In January, 1868, Otis made his initial effort towards acquiring Indian crania and continued the effort until a large number of them were added to the collection. He also arranged with the Smithsonian Institution to exchange the specimens of Indian archaeology except crania for the crania that the Smithsonian had received. In this way the two museums tried to avoid duplicating subjects. Eventually, however, the entire collection of Indian crania, several thousand in all, was transferred to the U. S. National Museum. In the meantime Otis prepared a check list of the crania, which was published in 1876, and republished in 1880.

Dr. Otis also in 1868 began a collection of specimens of diseases and injuries of the lower animals. Eventually, however, when the Department of Agriculture established a bureau for the study of these diseases and injuries, the Museum ceased its activity in this direction, though still receiving such specimens as were contributed.

From time to time the Museum has purchased specimens, more particularly anatomical models. It has also bought some specimens in series, mainly pathological, notably what was known as the "Gibson" collection, made mainly by Prof. Wm. Gibson, while Professor of Surgery at the University of Pennsylvania; it comprised 529 specimens; bought by the Museum in May, 1868. In 1886 the Museum bought the collection left by Prof. Frank Hamilton, of New York City, consisting of 150 specimens. It also bought a series of models of dissections made in cathcartine, in Edinboro, at the University; cathcartine is a mixture of glue and glycerine, and the formula was devised by Mr. Cathcart.

Of the specimens in series that were *contributed* may be mentioned especially the plaster casts of the skulls of the old Peruvians, showing trephining, part of the Muniz collection; bones from

Indian burial places, from Clarence Moore; Chinese medicines; four series of plaster casts of dentures, respectively from Drs. V. H. Jackson and Samuel Sexton, of New York City, Dr. E. S. Talbot, of Chicago, and the American Society of Orthodontists. Also a series of wax models from Dr. D. H. Goodwillie, of Hoboken, N. J.; a series of transparencies showing the anatomy of the face, from Dr. H. M. Cryer, of Philadelphia; and many series of photographs.

Omitting the series of specimens just mentioned, and omitting also those specimens acquired by the attachés of the Museum, the largest number from any institution was 1582 from the Smithsonian Institution, many if not most of which were afterwards retransferred to the U. S. National Museum. The next largest number was 238 from Dr. Wm. Thomson, already mentioned. He was then, during the Civil War, in an army hospital in Washington. Next to him was 205 specimens from Dr. Edwin Bentley, also of the army, and in charge of military hospitals in Alexandria, Va. Then the numbers scale down. The largest number from any one person was from myself.

It may be mentioned that the 25 specimens from Dr. S. N. Burnett, of this city, were mainly eyes that he had extirpated; the 37 from Dr. H. C. Yarrow, of this city, were mainly Indian crania; the 48 from Dr. C. B. Robinson, of this city, were from his veterinary hospital; the 39 from Dr. S. S. Adams and the 67 from Dr. G. N. Acker, of this city, were mainly from the Children's Hospital; the 86 from Dr. Paul F. Eve, of Nashville, Tenn., were urinary calculi; the 83 from Dr. L. A. LaGarde, of the army, were mainly from experimental shot fracture, done at the Frankford Arsenal; the 70 from J. F. Hartigan, of this city, were mainly acquired by him in making post mortem examinations for the coroner.

The specimens contributed by army medical officers during the Civil War, were mainly surgical. In many cases the specimens were credited to the officer in charge of the hospital, whether he had anything really to do with them or not, instead of to his subordinate.

During the period in which Dr. Woodward was connected with the Museum he gave lantern exhibitions from time to time in the lower room of the Ford's Theater building, which on such occasions was prepared for the purpose. These exhibitions were given mainly to members of Congress, the American Medical Association and the National Academy of Sciences. The object, of course, was to acquaint these bodies with the work of the Museum and secure their approval and support.

In February, 1869, the French Government was so desirous of securing information in regard to the American Indian that it employed an artist to make copies of some of the Indian crania.

In June, 1869, Dr. Curtis was detailed to photograph the eclipse of the sun, and went to Des Moines, Iowa, for the purpose. The work was done in coöperation with a detail from the Navy Department that was sent to take observations.

At the meeting of the National Academy of Sciences in 1870 Dr. Otis read a paper on Deformation of skulls, and one also on Indian crania, that were based mainly on work done at the Museum.

Occasionally a meeting has been held at the Museum in memory of some distinguished person, deceased; as in the case of Professor Baird, of the Smithsonian Institution, and of Sir James Y. Simpson, who first used chloroform as an anesthetic.

Among the earlier favorable notices of the Museum may be mentioned those of Berenger-Féraud and St. George Mivart in 1870; the former, in a French journal, said that the United States had done as much in the period of the Civil War as all Europe had done in a century, and that the Museum contained more specimens than all the anatomico-pathological museums of Europe combined. Mivart said that few nations would have so utilized the results of a protracted civil war as to make them available in after years for the advancement of medical science and the alleviation of human pain as the United States had done.

In the March number of *Lippincott's Magazine*, 1871, Woodward published some account of the Museum.

In 1871 the subject of vegetable germs as causative of disease was much discussed, and brought from Woodward a published statement that his own microscopic examinations of air supposed to be infected had failed to demonstrate the presence of any such germs. At that time he may not have known of the researches of Leewenhoek in 1700; of Mueller in 1786, and of Ehrenberg in 1838; but he knew of the work of Pasteur. The discovery of the anthrax bacillus by Koch occurred five years after Woodward had expressed his skepticism.

From time to time some one from abroad came to the United States especially to see the Museum and its work. I recall Victor Horsley, Pearce Gould, and Erichsen, of London. Erichsen came in 1874, and on his return said some very complimentary things about the Museum. He said that the Museum collection illustrated every variety of gunshot and arrow wounds and also those diseases that are more fatal than the bullet to an army in the camp or field. He spoke of the beautifully illustrated histories of the war, and in some detail analyzed the Museum catalogs.

The Museum was well represented at the Centennial Exposition in Philadelphia in 1876. Woodward was in charge of the representation of the Medical Department of the Army, which, of course, included the Museum, and he exerted himself to the utmost, as did also Dr. H. C. Yarrow, who was custodian of this

part of the exhibit. Both were Philadelphians by birth and therefore had a local pride in the success of the Exposition. Woodward read a paper on Typho-malarial fever, a name that he had given to a common form of camp fever, of which there were specimens in the Museum collection.

In October, 1878, specimens were received at the Museum purporting to be from cases diagnosed as Rocky Mountain fever; these specimens showed clearly the lesions of ordinary typhoid fever.

In May, 1879, there was received from New Orleans a unique specimen, showing the successful ligation of the innominate artery, in a case of subclavian aneurysm; the patient lived afterwards eleven years. The operator was a Dr. Smyth, of New Orleans.

Oct. 18, 1880, Dr. Fred Schafhirt died, and February 23, 1881, Dr. Otis died. Dr. D. L. Huntington, of the army, became curator.

By the death of Dr. Schafhirt the work in Comparative Anatomy almost entirely ceased, and eventually the greater part of the collection was either transferred to the National Museum or donated to colleges and schools for teaching purposes. In the meantime Dr. R. W. Shufeldt, of the army, went thoroughly over the collection, renovated it, and made a report thereon, which, however, was never published.

The year 1881 is memorable for the assassination of President Garfield. Taking place, as it did, in this city, explains the fact that Surgeon General J. K. Barnes, Dr. Woodward and, finally, myself were brought into the case. It is not necessary to go more into detail; the entire history of the case was published and commented on both in this country and abroad. The Museum contains the two specimens, the fractured vertebrae and the traumatic aneurysm of the splenic artery. Again, in June, 1882, the execution of the assassin Guiteau secured to the Museum his enlarged spleen and his skeleton; his brain was parcelled out among many alienists; what little is left I still have. For a long time I had also a small porcelain plate showing a deposit of arsenic, from the test made by Dr. W. C. Tilden, at one time in the chemical laboratory of the Surgeon General's Office. The arsenic had been placed on a bouquet of flowers sent to Guiteau on the eve of his execution. For the microscopical examination of the brain of Guiteau Dr. J. C. McConnell of the Museum prepared the slides that were examined by the other members of the committee, Drs. E. O. Shakspeare and J. W. S. Arnold. I might add that Guiteau's body was macerated by another attaché of the Museum, Ernest Schafhirt, who made a special preparation of the face, which I have been told was afterwards placed in an anatomical museum in New York City.

April 5, 1883, Surgeon General Barnes died; and October 10,

his successor, General C. H. Crane, also died. Woodward had become an inmate of a private insane asylum, where he later committed suicide.

December 28, 1883, the Museum and Library were placed under one officer, and Dr. J. S. Billings of the army was given charge. As a result of his appointment quite an impetus was given to the Museum work. He had been in charge of the Library about 15 years. Of course we all know that whatever Dr. Billings was connected with had to move, and rapidly. He expected a day's work to be done in a few hours, and a week's work in a day. He worked that way himself. He at once secured another anatomist, Dr. J. L. Wortman. Dr. Washington Matthews of the army was assigned to duty at the Museum, especially to study the Indian crania. Later Billings also secured Dr. W. M. Gray as microscopist and bacteriologist. All these men were very efficient.

Dr. Billings inaugurated several new features in the Museum work. With the assistance of Dr. Matthews he devised a new classification of specimens. He sent out circulars soliciting specimens, stating in much detail just what he wanted. With the assistance of Dr. Wm. Lee of this city he began a collection of medical medals, which now is quite large; most of them are exhibited in swinging frames. He began also a collection of microscopes, that may now be said to be historical; it is unsurpassed if indeed equalled elsewhere in this country. He had Dr. Gray make serial sections of fetuses and stain them; they were then mounted in swinging frames. Dr. Gray also made a series of transparencies of bacteria, parasites and morbid anatomy; these are either in swinging frames or in the windows. Dr. Billings enlarged the collection of specimens of embryology, both wet specimens and models. He began to enlarge the dental collection, that previously had had scant attention. He had Wortman make frozen sections and bought a series of dissections at the University of Dublin. Dr. E. M. Hodge, who succeeded Wortman as anatomist, made a series of sections of bone.

In 1880 the Surgeon General had recommended a new building for the Museum and Library and repeated the recommendation each successive year until finally Congress, in 1885, appropriated the money. This is the building now occupied by the Museum and Library. It also houses a part of the Record and Pension Division of the War Department, and several minor sections, including the chemical laboratory. It was finished and occupied in 1888.

The Hemenway Southwestern Archaeological Expedition that was financed by Mrs. Hemenway, of Boston, Mass., and was under the direction of Frank Cushing, the archaeologist, gave the Museum the opportunity to acquire a large number of skeletons and parts of skeletons of the sedentary Indians of the

southwest, mainly prehistoric. In 1887 Drs. Matthews and Wortman went to Arizona and began the collection which, after completion, was studied by Billings, Matthews, Wortman and myself and the results published.

I have mentioned that the Museum was represented by specimens at the Exposition in Philadelphia. I may add that it has also been represented at nearly all the subsequent Expositions, sometimes to a greater extent than others; at New Orleans, at Buffalo, at St. Louis, at Chicago, at Omaha, at Madrid. It has also been represented at a number of the meetings of the American Medical Association as well as of other bodies.

September 20, 1888, a reception was given to the Congress of American Physicians and Surgeons at the new Museum building, where Dr. Billings read a paper on museums in general, and the Army Medical Museum in particular. The paper was published.

After the close of the Chicago Exposition Dr. Walter Reed, of the army, who had been on duty there with Dr. LaGarde, of the army, was ordered for duty to the Museum and was appointed curator ; Dr. James Carroll came with him. It had been decided to inaugurate an Army Medical School. The school occupied a large part of the third floor and a part also of the first floor of the Museum building. It crowded the Museum and Library somewhat until, in 1910, it was removed to its present quarters at 721 13th Street, N. W.

In 1895 Dr. Billings, having been given charge of the fusion of three large libraries in New York City—the Astor, Tilden and Lenox—was retired from service in the army and, of course, severed his connection with the Museum. He was succeeded by Dr. Huntington.

About this time the attention of Congress was called to charges of cruel vivisection in institutions in this city, including the Museum. The charge was inquired into but was not substantiated.

March 17, 1897, an article by Dr. Huntington on the Museum and Library appeared in the *National Medical Review*, published in this city.

In 1898 Dr. Huntington was succeeded by Dr. Dallas Bache, also an army officer. Every few years from this time another army medical officer was placed in charge of the Museum and library. The personnel of the curator and librarian changed more rarely.

The same year an article on the Museum appeared in *Godey's Lady's Magazine*, by a Mrs. J. N. Kyle.

The war with Spain brought but few specimens to the Museum, and most of those that came were from Dr. Rupert Norton, who had been a practitioner in this city, and afterwards was superintendent of the Johns Hopkins Hospital. Dr. Gray served for some time on board the hospital ship "Relief," doing x-ray

work. Dr. Reed, in conjunction with Drs. Shakspeare, of Philadelphia, and Vaughan, of Ann Arbor, served on a board of inquiry into the prevalence of typhoid fever during the war. Afterwards Dr. Reed, with Dr. Carroll and others, served on a board of inquiry into the subject of yellow fever. The results were published. Much if not most of the work of preparation for publication was done at the Museum, and the chief clerk of the Museum, Mr. C. J. Myers, was especially complimented by Dr. Reed for his services.

In 1899 Dr. Hodge went to Manila in the Phillipines to collect specimens for the Museum—specimens illustrative more especially of tropical diseases.

April 23, 1900, Dr. A. A. Woodhull of the army succeeded Dr. Bache in charge of the Museum and Library. April 23, 1901, Dr. Calvin DeWitt, of the army, succeeded Woodhull.

September 19, 1902, Dr. W. E. Mew, the chemist of the Surgeon General's office died; he was succeeded by Dr. Hodge. This made a vacancy in the position of Anatomist, which was filled by the appointment of Dr. J. C. McConnell.

November 13, 1902, Dr. Reed died. He was succeeded as Curator by Dr. James Carroll. Dr. Carroll died September 16, 1907, and was succeeded as Curator by Dr. F. F. Russell, of the army.

In the meantime, July 20, 1903, Dr. DeWitt was succeeded by Dr. Charles Heizmann, of the army, in charge of the Museum and Library, and in 1905 Dr. Valery Havard succeeded Dr. Heizmann. Dr. McConnell died July 25, 1904, and was succeeded December 21, by Dr. D. J. Healy. Mr. Myers, the chief clerk, died March 22, 1905. Dr. Healy resigned in 1907, and was succeeded by Dr. J. S. Neate.

Dr. Carroll and Dr. Healy had begun a new classification of the Museum collection, following closely that of the Pathological Laboratory of McGill University, Montreal, Canada. After the death of Carroll and resignation of Healy, the classification was abandoned.

Dr. Havard was succeeded in December, 1909, by Dr. L. A. LaGarde, of the army. June 4, 1910, Dr. LaGarde was succeeded by Dr. Walter D. McCaw, of the army, who had been Librarian since October 3, 1903, following Dr. Merrill.

Dr. Gray died March 9, 1910; Dr. Neate then became Microscopist and Bacteriologist, and Dr. S. S. Hindman was appointed Anatomist February 20, 1911; he resigned July 28, and, March 19, 1912, Dr. Ralph M. LeComte was appointed Anatomist. April 28, Dr. Neate died and LeComte became Microscopist and Bacteriologist. Dr. J. R. Scott was appointed Anatomist, July 6. September 2, 1913, LeComte resigned to enter the Medical Reserve Corps of the army, and, October 7, was succeeded by Dr. Scott. Dr. Arthur Eisenberg was appointed Anatomist.

Dr. McCaw was relieved August 8, 1913, by Dr. C. C. McCulloch, of the army. Dr. Russell was succeeded as Curator by Dr. Eugene R. Whitmore, who, in turn, was himself succeeded, in 1915, by Dr. McCulloch. At present, therefore, Colonel McCulloch is in charge of both Museum and Library.

After the death of Dr. Carroll and resignation of Dr. Healy I was made Custodian in addition to Pathologist of the Museum, and directed to make such arrangement of specimens as seemed to me best.

The number of specimens in the Museum June 30, 1915, was 46,995, comprising 13,038 pathological, 1,205 anatomical, 624 comparative anatomy, 12,916 microscopical, 3,975 miscellaneous, 293 provisional anatomy, photographs 4,000 and negatives about 11,000. About 8,000 specimens have been donated to or exchanged with other institutions or persons, and about 3,500 have had to be discarded for one reason or another.

Perhaps the most interesting collection in the Museum is that of shot fractures of bones, nearly all of them from the time of the Civil War, most of them acute conditions, but many are sequelae, especially osteomyelitis. The missiles used were at first a round bullet or buckshot, later the rifle or miniè bullet, with cannon ball and shell. Besides the shot wounds there are wounds by swords, sabers, arrows, tomahawks and bayonets ; but bayonet wounds were rare.

There are also many fractures from falls, blows and other accidents ; many in which the cause is not stated.

Of the *wet* specimens, as they are called, the most interesting are those from infectious diseases—typhoid fever, tuberculosis, yellow fever, pneumonia, smallpox, epidemic cholera, leprosy, the plague, dysentery, diphtheria, pellagra, glanders and farcy, cerebro-spinal meningitis, &c.

There are specimens of embryology, both wet specimens and models. Malformations and monstrosities, human and comparative, including also ectopic gestation. Animal and vegetable parasites ; here may be mentioned the fungus foot of India. The hospital gangrene of the Civil War ; we do not see it now. Syphilis, calculi, renal, vesical and biliary.

There are many models, some in papier machè, others in plaster of paris, wax and cathcartine. The Baretta models, made by Baretta in Paris, the ingredients of which are kept secret, show normal and morbid anatomy.

There is a large collection of bones, termed precolumbian and prehistoric. Also a large collection of specimens, illustrating dental anatomy, human and comparative, dental pathology and therapeutics.

A large series of transparencies showing especially the various forms of bacteria and protozoa; also photographs of the same.

A large collection of instruments ; a series of microscopes,

historical; also microscope accessories; anthropometrical apparatus. Clinical thermometers, stethoscopes, ophthalmoscopes, sphygmomanometers, instruments for vaccination and hypodermic syringes, all historical; besides instruments generally. Also facsimiles of the instruments found at Pompeii.

Military medical chests and pouches of different nations; ambulances and litters also of different nations; missiles and weapons of different nations.

A series of Buchhold preparations of parasites and morbid anatomy in capsules. A series of rachitic pelves.

Sections of bone showing internal structure. Casts of skulls, racial. A series of frozen sections and dissections.

A miscellaneous series, including, among other specimens, a plaster cast of the left humerus of the African explorer Livingstone, showing healed fracture; model of the brain of the deaf, dumb and blind Laura Bridgman; the injured parts in the case of John Wilkes Booth; the fractured bones of the leg of General Sickles; the bones and enlarged spleen of Guiteau, the assassin of Garfield, and many other interesting specimens.

The Museum has been a great educator in anatomy and pathology. It is open to the public and is visited every year by thousands of persons, who carry away with them more or less valuable information, and no doubt impart it to others. Physicians and students consult the individual specimens; specimens almost without number have been shown to this Society; specimens without number have been sent to meetings of many other scientific bodies; many specimens have been used as the basis of illustrations in many publications, both in this country and abroad. The Museum laboratories have, through their microscopical and bacteriological work, given a mass of information to both military surgeons and civil practitioners.

Besides all this, there is a sentimental side. The old soldier of the Civil War, or his children or children's children, still visit the Museum, to look upon the fractured bone or amputated limb, pathetic token of his part in the great fight for the Union. So in more ways than one it may be said that the wisdom of Dr. Hammond in founding the Museum in 1862, 53 years ago, seems fully justified.

Dr. F. H. Garrison, of the Library of the Surgeon General's Office, said that the Medical Society as well as Dr. Lamb was to be congratulated upon the presentation of this exhaustive and valuable paper, which no one but its author could have written. It presupposed a life long acquaintance with the official records and a memory of events that went back to the Civil War. Any one familiar with the nature of public records would realize that it needed close knowledge of these to get anything of value out of them, and it was probable that no later official could deal with this part of the subject so well. For a long time Dr. Lamb had

been practically the Curator of the Army Medical Museum and many of its specimens, as in the collection of John Hunter in London, or Virchow in Berlin, were prepared with his own hands. It might be of advantage to the Museum if Dr. Lamb's list of *desiderata* were printed in the ANNALS of the Society. The gaps in the Washington collection, as was originally the case in the Hunter Museum, are mainly in the physiological series and the corresponding pathological series, and it is possible that some practitioners or surgeons of the District of Columbia might be able to help out with a specimen here and there.

The Surgeon General's Library, in the Army Medical Museum building, began as a small collection of medical books in the office of Surgeon General Lovell, 1835; numbering about 135 works, (228 volumes), in 1840, and increased to about 587 volumes by Surgeon General Hammond in 1862. Dr. Billings came on at the beginning of 1865 in Surgeon General Barnes' administration, and at this time the collection numbered 1,365 volumes. Soon afterwards General Barnes acquired the use of $80,000.00 for the purchase of books—a slush fund turned in from the dismantled army hospitals—and by 1871 the Library contained 13,330 volumes. Appropriations for further purchases were obtained from Congress, and catalogs were printed, that of 1873 showing 25,000 volumes and 15,000 pamphlets. In 1876 Dr. Billings published his *Specimen Fasciculus* of an index catalog (by authors and subjects), which was well received by the medical profession. Soon afterwards he secured the valuable aid of Dr. Robert Fletcher. In 1880 Volume I of the Index Catalogue was printed, and has been followed by a volume each successive year, the whole first and second series, to be completed in 1916, making 37 volumes in quarto. The Surgeon General's Library has the best collection of medical periodicals in the world, and this periodical literature, the most important part of modern medicine, is well indexed in the catalogue. The only things lacking are certain rare and expensive transactions of societies, but even the medical papers in these are often indexed in the form of abstracts, printed in other journals. Physicians would have better success in finding things under the subject entered in the catalog if they minded the cross references. An article on "Pneumopericardium" for instance might not be found under this heading, but would appear under the referred subject "Pericardium, (air in)".

Dr. E. M. Schaeffer had heard with much interest the review of the history of the old Army Museum, which brought back to his memory many scenes and faces of former days. The mention of the photographic division reproducing the picture of John Wilkes Booth for distribution to aid in his capture after the death of President Lincoln in April, 1865, reminded Dr. Schaeffer that

one of his first duties when assigned to the Museum as a hospital steward of the Army was to mount on cardboard several hundred of these copies which had been made by Dr. Edward Curtis. Not long after this Dr. Woodward received a message from the War Department directing him to take his post mortem case and repair to the Arsenal. When he returned to the Museum he said that he had made an autopsy on Booth, whom he would have recognized from the photographs, although the face was much freckled and tanned by exposure to the sun. Dr. Woodward brought with him the cervical vertebrae and spinal cord showing the track of the bullet that had killed Booth; after further examination these were properly prepared and placed in the Museum. The specimens had been wrapped in stout brown paper. At that time there was a rage for relics and souvenirs of all kinds, and, influenced by this feeling, Dr. Schaeffer cut off and preserved, duly labelled, a portion of the blood-stained paper as a somewhat ghastly souvenir of the tragedy. He placed it in his cabinet and had forgotten it when about fifteen years afterwards, in searching for some specimen of dried human blood to illustrate to his private class in microscopical technique, he remembered the paper and submitting it to the proper treatment by macerating and teasing with needles to bring out any structure that might remain, much to his pleasure and rather to his surprise, the red corpuscles were seen with a vivid distinctness, often sought in vain in more recent cases.

Among other reminiscences, he recalled the epidemic that visited the city some forty odd years ago among the horses. Probably *epihippic* would be etymologically the more correct term. He was sent from the Museum to test the air for germs, in the large stables of the Washington and Georgetown car line. The air was collected by Pouchet's apparatus, then in use, and the collected dust was examined microscopically at the Museum. The conditions in the stables, where hundreds of sick and dying horses lay, some swollen out of all resemblance to the normal animal, and many with pus streaming from their nostrils, was something "fierce." Business was for a time prostrated. He remembered going to the Museum one morning and meeting the late Dr. James E. Morgan, for many years a prominent member of our Society, going his daily rounds in a "horseless" buggy with two stalwart hostlers between the shafts where the horses were wont to work.

One of Dr. Schaeffer's most pleasing duties was to show around the Museum and especially in the microscopical section, medical officers from all parts of the world, on a visit to our capital. Dr. Fu-kui, a very intelligent Japanese, came every day for several weeks to study the microscopical technological work of the Museum, although Dr. Schaeffer's somewhat limited command of Japanese, and the interpreter's difficulty in finding Japanese synonyms for many of the terms, rendered progress rather slow.

On one occasion when it was desired to repeat an experiment for verification or contradiction, in which a pathologist from Philadelphia had swallowed two ounces of a fluid mixture of raw beef infusion in a highly decomposed condition, after which his blood was said to show many living microbes when examined microscopically. One very hot day Dr. Schaeffer prepared the solution, and when all was ready for the experiment, the question arose as to who should take this highly malodorous repulsive concoction, a veritable "hell broth." At length Dr. Schaeffer offered himself and succeeded in swallowing, and what was more difficult, in retaining the entire dose. His blood, examined at intervals by the officers, failed to show the slightest abnormal appearance, and the Museum triumphantly disproved a new and startling discovery, certainly in one instance.

Dr. Schaeffer apologized to the Society for the length of his remarks and said that when he began to think of the old times he insensibly went beyond the usual limits.

Dr. Edwin R. Hodge said that Dr. Lamb had so completely covered the ground that little or nothing remained to be added except, perhaps, some unimportant minutiae. However, it occurred to Dr. Hodge that there was a matter upon which too much emphasis could not be laid. It was a work that stood out so preëminently among the brilliant achievements in American medicine, and had led to such momentous results for the public welfare, that it should be fully recognized that, apart from certain observations and experiments made in Cuba during the prevalence of yellow fever, the long and painstaking investigations of Major Walter Reed and his confrères of the Army Medical Board as to the causes of yellow fever, were actually carried forward and completed in the laboratories of this very Army Medical Museum building. Likewise, in the same institution was the work done that resulted in the published report showing the relation of the house-fly to the spread of typhoid fever, as well as that later carried out by Major Frederick F. Russell which has accomplished the complete immunization of the United States army from that dreaded scourge.

Dr. Kober could not refrain from expressing his very deep appreciation of Dr. Lamb's history of the Army Medical Museum and its remarkable activities. His contribution was worthy of his masterly but modest mind; its interest was enhanced by the fact that Dr. Kober himself had had the pleasure of personally knowing all the men whose names brighten the annals of that institution, except Drs. Brinton and Curtis, among the pioneer workers of the days of the Civil War. Dr. Kober had personally known Dr. Lamb since 1871, and did not hesitate to declare that of all those who had been mentioned by the historian, none deserved more credit or more public appreciation for what the Museum had become than our esteemed friend and fellow member, Dr. Lamb.

All the members of the Society were familiar with the painstaking and scientific methods of collecting and analyzing a vast amount of pathological material, and the Museum spoke for this. Dr. Lamb had not only been the largest individual contributor to the Museum but the Medical Society had also had the benefit of his presentation of specimens, case histories and pathological findings collected by him. Hence we were justly proud of his achievements in behalf of science and felt duly grateful for the instruction received from him. While listening to his paper Dr. Kober thought of the beautiful tribute paid by the great pathologist Virchow to the work of the U. S. Army Medical Corps, and it might not be amiss to reproduce in part at least the judgment of that competent, and certainly not overindulgent, critic on the publications of the Museum catalogs and the Medical and Surgical History of the War. "That the French in the Crimea learned from their experience little or nothing, and the Americans in their Civil War so much; that from this time dates a new era in military medical science; these results were brought about not by the magnitude of the need which the Americans had to suffer, for this was not greater than that experienced by the French in the Crimea, but rather by the critical and truly scientific spirit, the open mind, the healthy and practical understanding, which in America gradually permeated all the departments of the army organization, and which under the wonderful coöperation of an entire people, reached the highest point in humane efforts in a great war. Whoever takes up and reads the extensive publications of the medical staff of the United States will be constantly astonished at the wealth of experience therein found. The greatest exactness in detail, careful statistics and a scholarly statement embracing all sides of medical experience, are there united in order to preserve and transmit to contemporaries and posterity, in the greatest possible completeness, the knowledge bought at so vast an expense."

Dr. Kober said that it was fitting that the Society should honor Dr. Lamb on the occasion and moved a vote of thanks and congratulations on his fifty years of service in the Army Medical Museum, united with the fervent hope that he might enjoy many years of usefulness in the cause of science and medical education. [The resolution was adopted by a rising vote.]

The Swallow's Home.—The teacher in natural history had received more or less satisfactory replies to her questions, and finally she asked:

"What little boy can tell me where the home of the swallow is?"

Long silence, then a hand waved.

"Well, Bobbie, where is it?"

"The home of the swallow," declared Bobbie, seriously, "is in the stummick."—*Life.*

FOREIGN BODIES IN THE RECTUM.*

By Llewellin Eliot, M. D.,

Washington, D. C.

Foreign bodies of various kinds, descriptions, shapes and composition are, at times, found in the rectum. These substances, when swallowed pass through the stomach and intestines, frequently to become arrested in the rectum; some of them may be formed in the intestinal canal and pass along with the feces to be stopped in their course by their size, shape or position; others may be introduced directly through the anus and then be pushed up into the cavity of the rectum; finally they may pass into the rectum by perforation from the bladder in the male, or through the posterior wall of the vagina.

Among published reports of foreign bodies which have been swallowed some will be mentioned: needles, pins, bones, fruit seeds, large pieces of meat, gristle, false teeth, coins, forks, knives, mice, bits of glass and pieces of jewelry; of those formed in the intestines are: various enteroliths incident to bilious disorders and hardened feces; while among those introduced through the anus we find: bottles, pieces of wood, drinking glasses, snails, coins, jewelry, the frozen tail of a pig, pestles and military despatches.

There is no difficulty in understanding the entrance of foreign bodies by the mouth, since they are usually the result of accident, although they may be swallowed by the insane or by others with suicidal intent; some cases have been reported where boasting, or the desire for money gain, notoriety, or personal safety has been the incentive.

When we consider the direct introduction of these substances into the rectum we are brought face to face with evidences of malice, revenge, efforts to destroy the life of, or to permanently disable the victim, erotic excitement, futile attempts to relieve urinary retention, diarrhea or constipation. Insane persons have forced pieces of wood and other articles into the rectum; some have used the rectum to conceal coveted articles.

The criminal classes have frequently found the rectum a safe place to conceal valuable small articles of plunder, and although by no possible chance could they have disposed of them, evidence has not been produced showing actual possession. They have been known to conceal therein things necessary to assist them in effecting escape from prison.

Records show that timid men making journeys through dan-

*Read before the Medical Society Oct. 27, 1915.

gerous localities have deposited their money and other valuables in the rectum.

Wonderful, ridiculous, fantastic have been the stories told by some to account for the presence of these bodies, such as, falls on beer glasses, on pieces of wood, on bottles, on knives; these statements are the result of a feeling of shame, as well as an imposition upon the supposed innocence and ignorance of physicians; occasionally the statements are true.

Lingard tells us, in The History of England, the facts of the murder of King Edward 2d, in 1327, where the murderers plunged a red-hot iron into the rectum, having first introduced a horn tube.

When lust or erotic excitement controls the party and violent orgasm follows the manipulation of the genital organs, especially in hysterical women, the intensity of the paroxysm may cause such a loss of feeling that the victim unconsciously pushes the instrument into the rectum instead of into the vagina; while old men, in their desire to appear virile will sometimes push a round, hard substance into the rectum, in this way insuring a necessary erection.

In the paederist or in the morally depraved, accidental introduction stories will not hold good as an excuse.

A peeled radish covered with hot ashes introduced into the rectum was the punishment accorded by the Greeks to the adulterer.

The *necessaire,* a thing common among the equipment of criminals, consists of a cylindrical box of wood, closed at one end with wax; it contains several pieces, sometimes as many as thirty, which fit into one another so as to form a file or a saw, the box making a convenient handle. Although this instrument is very imperfect, still with patience and application iron bars may be sawn through. A *necessaire* will ordinarily measure from five to seven inches, and while it looks innocent enough, it may cause the death of the person concealing it. Closmadeuc recorded an instance where one unfortunate had concealed the instrument, but it caused such a peritonitis that death resulted, and at autopsy it was found in the transverse colon. By some jugglery of imagination this instrument often receives his name.

The length of the sojourn of these bodies in the rectum may be a few hours, some days, sometimes several months, and occasionally some years.

It would require too much time to quote the many reports of foreign bodies removed from the rectum; let it suffice to make mention of a few of the more important and singular: Adler; the handle and the valve of a steam radiator pipe, 1½ inches in its smallest diameter, 2½ inches at the other end. Shields; a

bar of silver 5½ inches long, 8½ inches in circumference, and weighing 30 ounces. Sevilla; a glass insulator used for telegraphic wire; abdominal section was required; death resulted. Truell removed a large stone by abdominal section; Warren; a catsup bottle 10 inches long, 9 inches in circumference, and refers to a case of a beet 7 inches long, 3½ inches in diameter; 3½ multiplied by 3.1416 makes 10.9956 inches in circumference; he refers also to a case of Walker, where a turnip 9½ inches in circumference was removed. Rhett Goode; the bulb of a 16-candlepower incandescent electric globe, 7½ inches in circumference, was pushed into the rectum for the relief of piles; the globe was broken in extraction, the rectum wounded and death resulted; in the discussion of this paper C. W. Stiles spoke of a soldier who had regularly, for two or three months, introduced turkey heads into the rectum in order to obtain his discharge from the army; also of a specimen that had gone from laboratory to laboratory, without a solution of its identity, and was finally proved to be the fetus of a kitten that a man had introduced into his rectum. Stiles also spoke of a woman who had introduced fish entrails, and of another who had used those of a pigeon. Jenkins; a case where tramps had assaulted and robbed a man; not getting enough money from him, they took a turnip, hollowed out the lower end, put a potato in the hollow, and passed a string through them from end to end, then pushed the thing into his rectum. Pollak; a champagne flask 12½ inches long, 2¾ inches in diameter, 8⅔ inches in circumference; had been in the rectum for 26 days. Dahlenkamp; a piece of oak bark, 4½ inches long, found 5 inches up the rectum, had been there for ten years. White; a ten-pin, 10 inches long, 2 inches in circumference. Adler; the bones of a fetus of extra-uterine pregnancy, and as some of our members may recall, P. J. Murphy reported a similar instance to this Society.

These references will show the character of the bodies with which this paper deals.

Symptoms.—The presence of these foreign bodies is made manifest by symptoms, both subjective and physical. Pain is the most constant, whether the body has entered by the mouth or by the anus. This pain is the result of efforts at expulsion; it may be slight, or it may be very severe, especially when the body has a sharp or cutting edge, thereby wounding the mucous membrane. Constipation is another symptom, but not always present, since muco-purulent or bloody stools have been observed. Genito-urinary disorders, from compression may soon occur; they may also result from ineffectual attempts to obtain relief. Hemorrhage is another inconstant symptom. On examination, one usually finds some evidence of inflammation about the anus;

there may be cyanotic and edematous puffiness; upon separating the buttocks, the anus appears as if forced outward, and hemorrhoids, if present become very much enlarged and darkened. The anal orifice is constricted; prolapse of the mucous membranes is frequently observed. The finger or instruments will, in the majority of cases, reveal the foreign body. These bodies, unless very smooth, are usually fixed, and when they are large are about two or three inches above the anus; they may be implanted or they may lie transversely resting in the hollow of the sacrum, or against the coccyx, in the walls; or they may be forced into the crypts of Morgagni. The antiperistaltic movements of the bowel and the contractions of the sphincter cause them, in some instances, to work their way high up in the rectum. Concretions are attended with constipation, pain, sometimes mucous or muco-sanguinolent fluid discharges.

There is always a feeling of weight in the rectum extending to the loins, the perineum, or the lower limbs. Tympanitis may occur; cold sweating and convulsions are frequent.

Through the unaided efforts of nature these bodies may be expelled; they may be tolerated for a long time and cause no symptoms; they may produce inflammatory accidents, hemorrhages, ulcerations, invaginations, abscess, fistula, or cause perforation; they may produce symptoms of obstruction by preventing the passage of feces.

When expelled spontaneously the desire to evacuate the bowel will be intense and there will be general swelling of the lower part of the rectum and of the anus. These expulsive efforts cause great stasis of the blood and projection of the mucous membrane; mucous or sanguimolent passages are frequent. These efforts at expulsion may last half an hour without result, and be repeated several times until the offending body has been expelled.

Invagination requires the presence of a hollow body, such as a beer glass, a bottle, or a jar.

Treatment.—In the treatment of this class of cases we have either to do much or to do little. Little, when the body has been swallowed, is small and of a smooth surface; much, when things are reversed, especially when the body has been introduced from without, and is of large size or irregular in shape.

Needles, pins, coins, fruit seeds, will ordinarily cause little anxiety on the part of the physician, since they usually pass after the administration of a cathartic or a diet of mashed potatoes, or some other such substance.

If the offending body be indurated feces a laxative should be given, followed by nux vomica, or turpentine or ox galls. Suppositories of soap have given good results. The continuous or

repeated injecting of sweet oil or warm water will so soften hardened feces that they may be removed with the fingers or a scoop, but one must not use too high a pressure in giving the injections as the feces may have caused beginning ulceration and so weakened the bowel wall that rupture may follow.

In view of the fact that these bodies have, in many cases, been attended with disastrous results, it is best to begin active efforts for their removal. If they are small and are presenting at the anus, they may be grasped with the fingers or forceps. The hand may be introduced and the body grasped and removed; this has been claimed for Simon, but the records of this Society will show that my father resorted to this method of removal long before Simon did. It was only a revival of what Thomas did in 1805. The handle of a spoon, a gorget, or a spatula have also been used with success. Manunta employed a lithotrite to break a coffee cup; Parker used a cephalotribe; Martin used an obstetric forceps; Anderson used a wire ecraseur. Hooks and a gimlet have been used, as have a canula, and a hollow reed. The sphincter has been divided in a few instances where the body was very large; the coccyx has been excised to give more room for extraction, and in a few cases a laparotomy has been required; this last has been resorted to only when the body was in the upper sigmoid or in the transverse colon, or when perforation of the bowels had resulted.

When one introduces his hand into the rectum, he must remember that it is not so much the size of the hand that causes the damage—that is to say, the incontinence of feces, the tearing of the tissues, or the rupture of the rectum—as it is the force employed, the rigidity of the sphincter, and the rapidity of the introduction. The anus will, under ordinary circumstances, allow a hand of about number 7¾ glove to pass without damage. Simon said that one 9⅞ inches could be passed; a patulous anus will offer less resistance than one in a healthy state.

Dilatation with the speculum or the calibrator should precede the hand; the fingers, in the shape of a cone are first gently inserted, taking a slightly forward direction; with patience and perseverance the entire hand will enter the rectum, where we will have more room.

The operation of proctotomy or rectotomy will not be necessary very often, but the division of the sphincter will be required quite frequently, since the resistance is at the anus and not in the rectum. When, however, it becomes necessary to divide the rectum and the sphincters, always make the incision directly toward the coccyx, and repair the damage at the time of the operation; otherwise the patient might consider the treatment he received a species of malpractice, and, to tell the truth, I think he would be justified in his belief.

All manner of forceps have had their use in the removal of these bodies; even the placental forceps was called into requisition in one of my cases, while an improvised fillet was used in another.

An anesthetic is advised, unless extraction will be easy; a general anesthetic I think preferable to a local agent.

I shall give some details of four cases among others that have come to me.

Case 1.—White woman; had an abortion performed on her in October, 1899. Seven days afterward was called to see her. Curetted and packed, then left her in the care of her physician. Five days later he was conveniently called away from the city and she again fell in my hands. Her condition then was retention of urine, no bowel action for five days, great but ineffectual straining at stool. She was catheterized and given a saturated solution of sulphate of magnesia. On the next morning the catheter was again necessary and again at night; no bowel movement, but continued straining, and pain in the rectum. Examination showed everted mucous membrane and the rectum packed solidly with feces. An irrigation tube was introduced and a constant stream of water thrown into the rectum; elevation of the irrigator four feet. The end of the tube was frequently worked against the mass and then withdrawn; with the finger several lumps of feces were removed and the irrigation continued for two hours, when the bowels moved freely. There was no further urinary trouble and she went on to complete recovery.

Case 2.—W. M., aged 15 years. Two days before I was called, had swallowed a piece of bone while he was eating soup. Was given a quantity of mashed potatoes and soft bread. On the following morning he was given a dose of castor oil. During the evening the bowels moved quite freely, with great pain in the lower bowel and much straining; in the night he had increased straining and pain, requiring a dose of morphia to relieve him. A very sharp pain was felt in the posterior surface of the rectum. On the following morning I was called in consultation, when an examination with the finger showed some foreign body, well fixed. An anesthetic was given; the sphincter dilated with the fingers, then with an anoscope. The foreign body proved to be the piece of bone he had swallowed; it had been driven into one of the crypts. Seizing it with a forceps, it was lifted from its bed, pushed upward and removed. An irrigation with sterile saline solution was given; then an injection of flaxseed tea. No further trouble.

Case 3.—White man, aged 35 years. Seen in December, 1913. Attended a banquet the night before he was seen. All the following day he suffered from pain about the anus with a feeling

of constriction; the pain and discomfort were so great that he couldly hardly sit. There was a feeling of protrusion at the anus and, thinking he had an attack of hemorrhoids, he had applied an ointment after he reached home. In the night, when I saw him, he was tossing about the bed, had cold sweating, and his suffering was intense; he said his piles were as big as his fist. Examination failed to show piles, fissure or prolapse. Introducing the finger above the sphincters, a hard substance was found; it was lying across the rectum and pushing into the mucous membrane, both anteriorly and posteriorly. Traction on it caused an increase of pain. The posterior end was released by pushing it upward, this allowed the anterior end to be freed; by manipulation and gentle traction extraction was effected. The foreign substance was a piece of chicken-bone two inches long and a quarter of an inch broad, sharp at each end. An injection of starch water was given, and he was well enough to go to his office the next day.

Case 4.—White woman, aged 19 years. For the purpose of masturbation used a farina cologne bottle covered with a wicker work of reed. In some way the reeds had become broken. In using this instrument on the night I was called to see her, she had passed it into the rectum by mistake. Unable to extract it, she became hysterical; this state increased when she saw blood coming from the rectum. She was given an anaesthetic and, after several failures in extraction with forceps, a fillet was made and the bottle, with the ends of the broken reed so protected, extracted. The only further treatment was with the bromides and rectal injections of soothing waters. The bottle measured 10 inches in length and 8 inches in circumference.

THE ROENTGENOLOGIST AS CONSULTANT: HIS RIGHTS, PRIVILEGES, AND HIS RESPONSIBILITIES.*

By Charles A. Pfender, M. D.

Washington, D. C.

The exact status of the roentgenologist as a medical consultant and specialist is not universally appreciated by the medical profession at the present time. That this should be the case is not surprising when we recall that this branch of medicine is a very recent one, when compared with other branches such as surgery, obstetrics, pathology, laryngology, and allied medical specialties.

*Read before the Medical Society November 24, 1915.

Moreover, the progress made in the specialty of roentgenology during the past five years has been more culminant than in any other diagnostic or therapeutic measure known to science. Leaping strides of progress have created many new debatable questions of which the members of the medical profession have not yet become fully apprised. In order, therefore, that the relations between the referring physician or surgeon and the roentgenologist may be wholly in accord it is essential that we become fully conversant with these points so that united coöperation may crown our efforts with success.

That there seems to be a need of a general clarification finds corroboration in the following statements which recently appeared in the editorial columns of one of our medical journals. In speaking of the medical men of the Pacific Coast the author says: "The Pacific Coast Roentgen Society has a good battle to fight for reliable roentgen work. As one of the Pacific Coast roentgen pioneers remarked, there is an unusual amount of 'jitney' x-ray work on the coast. It seems to be the impression among many physicians there that merely the roentgen negative at the lowest price possible is the only thing necessary. They seem to be ignorant of the great fact that the interpretation of the plate is the essential factor in efficient roentgenology. A roentgenologist does not base his fees upon plate expanse; his interpretation of a roentgen plate is a consultation service and demands the honorarium accorded medical consultants. Non-medical roentgen operators have their place as technical assistants to roentgenologists, but there is no excuse for the physician who accepts the interpretation of a roentgen plate from anyone who is not qualified as a medical graduate and learned in pathological roentgenology."

Considering for a moment the qualifications of a roentgenologist, it is essential that he be a graduate in medicine and surgery and in addition well grounded in the principles of photography and general physics. The roentgenologist should be able to determine from the clinical history what part of the human organism requires examination. Whatever procedure he may employ in his examination, whether roentgenography or roentgenoscopy, or both, is for him to say. A diagnosis is desired, and it should be the privilege of the roentgenologist to resort to any roentgenological measure that he may find necessary or expedient. The roentgenologist should know the differential pathology of disease in order to correctly interpret his findings. This knowledge, in turn, will enable him to select the proper technic which will bring out clearly what the clinical history or the operator's experience may lead him to suspect. He should also be thoroughly familiar with the physiological functions of the various organs of the body. Naturally he must know anatomy, must be

familiar with the normal conditions if he expects to detect and correctly interpret pathological findings. He should be well informed on the appearances of the growth and development of bones at different ages. Last, but by no means least, he must be well posted in therapeutic measures and in surgical procedure. There are frequent instances where the surgeon or physician referring the case will solicit the opinion of the roentgenologist as to the best form of treatment to follow. *The further treatment of the case will sometimes hinge largely on the opinion rendered by the expert in roentgenology.* Again permit me to quote from a recent editorial which says: "We feel that the position of the roentgenologist is emphatically that of a teacher. Difficult cases are constantly presented to him for examination and, if he is sincerely interested in his work and in the restoration of the patient's health, he will be able to suggest to the one in charge of the case methods of approved treatment. The education, therefore, of the roentgenologist is a matter of great importance. If he is in the photographic class, his work is no more valuable than the photographers'. If his range of reading has lifted him above this, he should be ranked as a consultant."

In view of the fact, therefore, that the patient is referred to the roentgenologist for an examination and an opinion as to the findings in the case, the roentgenologist occupies the position of medical consultant and is entitled to all the rights and privileges that consultants in other specialties enjoy. It is the opinion or interpretation rendered by the roentgenologist that validates his services. Any number of plates, prints, tracings, records, etc., without this opinion are of very little value, and for evidential purposes in court are recognized as being competent evidence only when supported by the testimony of a person expert in roentgenography.

We know that whenever a consultant pathologist, for example, makes an examination of the blood of a patient referred to him, he submits his report in writing or orally and it is usually accepted without question. No demand is made for smears or stained specimens such as he may have made in order to arrive at the opinion rendered. Or, again, when a competent pathologist has examined a piece of tissue as to its possible malignancy his report is usually accepted. This is precisely what we have been taught to expect. No demand is made on the pathologist to surrender the slides upon which he bases his opinion. These slides, however, are always available for study whenever desired by the physician, but should remain in custody of the pathologist. In fact, he feels obliged to retain these slides so that he may be able—should the case prove a legal one at any time—to produce these as evidence supporting his opinion. With the roentgenologist the conditions are similar. All roentgen

plates, prints, tracings and other documents which he may prepare are his sole property and merely a means towards aiding him at arriving at a diagnosis.

In this connection I should like to quote Professor Albert Schönberg, of Hamburg, who says: "The ownership of x-ray plates, etc., is often claimed by one of two parties—the patient himself, or the medical attendant in charge of the case:

"First, as regards the medical attendant who sends the patient for roentgenological examination, has he any right to retain the plates or prints? We must bear in mind that the roentgenologist is applied to in his capacity of consulting medical specialist, not as a mere photographer or lay roentgenographer who happens to possess the necessary apparatus. The rule of ownership as applied to the photographer or to the lay roentgenographer does not apply in this case. At the present day the status of the roentgenologist as a medical specialist is duly acknowledged in the medical world. The justice of this is self-evident when we reflect on the ordinary routine of a typical radiological consultation and examination. The patient comes to the roentgenologist on his own initiative, or he is sent by the surgeon, or by the family physician. The object of the consultation is the elucidation of doubtful or obscure symptoms, and the establishment of a correct diagnosis. The roentgenologist examines the patient by all means at his disposal, after having inquired into the clinical symptoms. Should he consider the case a suitable one, he next proceeds to examine the patient by the x-rays, or, on the other hand, he may dismiss him without roentgen examination. He may take a roentgenogram, make a radioscopic examination, or use the orthodiagraph, according to circumstances. The decision which, if any, of these methods should be used rests with the roentgenologist alone, neither the patient nor the physician having any voice in the matter. The radiologist then proceeds to give his verdict, basing his diagnosis on the results of his clinical and roentgenological examinations. This he may give to the physician either verbally or in writing, explaining, if necessary, by demonstration of the skiagram or tracing. This completes the work of the roentgenologist, and the payment of the fee concludes the business, as in any other medical consultation. The roentgenologist does not sell one or more skiagrams, but receives his honorarium for a scientific opinion in the case.

"In certain cases of insurance companies and the like it may be necessary to submit the x-ray plates or prints for their inspection, but in this case there is always a written agreement between the roentgenologist and the company, so that the question of the former parting with the plate or prints does not arise.

"So also in cases of emergency, accidents, shot-wounds, and

the like, where surgical aid can not be delayed, the roentgen negative itself may be sent directly to the surgeon.

"As a general rule, however, it is not advisable to give up the plates, prints, or tracings to the general practitioner, since he is not a specialist, and is therefore not in a position to make a correct diagnosis of the case from the roentgenographic data.

"From the standpoint of the roentgenologist I do not consider it advisable for him to allow the original negative to pass out of his hands. The original plate should be kept, together with the record of the case, for future reference. It is often of the highest importance to be able to refer back to the original skiagram. All x-ray plates relating to cases of accidents should be carefully preserved. The granting or otherwise of compensation may depend on the evidence of a roentgen plate taken many years ago, and if this is missing, because it has passed into the possession of the medical atendant, the subsequent roentgen examination may prove quite illusory."

Schönberg also states that "It may, however, be allowed that under certain circumstances the patient may be furnished with a print of the roentgen plate, on payment of an extra fee; but it should be well understood that the patient has no *right* to this, but receives it only as an act of courtesy from the roentgenologist."

In 1910 the eleventh Congress of the American Roentgen Society resolved that the roentgenologist retains the ownership of the roentgen plate, on the ground that it is an integral part of the documents of the case. In a recent meeting of roentgenologists a committee on "The relation of the roentgenologist to the referring physician or surgeon" stated that it was the sense of the committee to discourage the routine giving of plates or reproductions. In regard to the relation of the roentgenologist to the patient the committee reported thus: "First, That no report should be given to the patient except through the referring physician or surgeon. Second, That patients are sent for consultation and diagnosis and are not entitled to plates nor prints. Prints in the hands of patients lead to false interpretations, confusing opinions, multiplicity of advice and bad results."

The Eighth Berlin Congress of the German Roentgen Society unanimously adopted the following resolutions:

1. Roentgenology is a duly authorized medical specialty, just as are laryngology, ophthalmology, etc.

2. The roentgenologist is a medical specialist, and as such, in accordance with the usual medical custom, is called in by the physician or the patient as a consultant to make or to confirm a diagnosis.

3. The roentgenologist makes use of roentgen examination in

addition to the usual clinical methods. He alone decides what particular procedure shall be employed—radiography, radioscopy, orthodiagraphy, or teleroentgenography.

4. All plates, diapositives, tracings, orthodiagrams, and teleroentgenograms prepared for the diagnosis of the case are the property of the roentgenologist, just as histological preparations belong to the consulting pathologist. The roentgenologist will, as a matter of courtesy, be always ready, if requested, to place his plates or prints at the disposal of the consulting physician.

5. The supply of plates or prints to sick-clubs or insurance companies is a matter of special arrangement. Further, in urgent cases it is the custom for the roentgenologist to place his plates and prints at the disposal of the surgeons.

6. The roentgenologist may at his discretion place a copy of the plate at the disposal of the patient, either gratuitously, or on payment of a fee. This should, however, be only done in those cases where it can not harm or cause anxiety to the patient.

If you will give the matter a moment's consideration you will no doubt observe that the necessity for preserving large numbers of plates, prints, etc., involves considerable expense, requires much space and incurs a great deal of labor on the part of the roentgenologist to insure their proper care and classification. Personally I should be pleased to be relieved of these obligations. It seems, however, that we are held responsible for our work for some time afterwards. Therefore, if we are obligated to retain these records in safekeeping, how long will we have to be encumbered by them before our responsibility ceases? I doubt very much whether we can be held liable by the courts for the indefinite preservation of our records. I would suggest, however, in view of absence of precedent, that three years be considered sufficient time for the preservation of any records, except such records as are already involved in legal procedures.

The erroneous idea among the laity that the roentgenologist is a sort of a photographer is probably largely due to the fact that physicians have drifted into the objectionable habit of sending the patient "to have an x-ray picture taken." It is not a picture that is wanted, but the opinion of the roentgenologist with whom you confer. It so happens that roentgenographic examination forms the basis of the expert's opinion, as a rule. The roentgenologist should make his report to the physician who referred the case, and, if possible, the physician should examine the plates with him, so that he may gain the fullest possible knowledge of existing conditions.

There is probably no other specialty of medicine which requires so large an outlay of cash as that of roentgenology. Every examination calls for an additional cash expenditure, and no one

is better qualified to specify the cost of an examination than the operator who foots the expense, and the physician who refers a case should as a matter of courtesy allow the roentgenologist to make his financial arrangements directly with the patient. The roentgenologist is not only called upon to give his time and his skill, but must furnish equipment and material, and the least that the patient or physician could do would be to compensate him for this cash expenditure. Those familiar with roentgen-ray laboratory work will bear me out in the statement that the average fees charged by private medical roentgenologists in the city of Washington are less than the fees usually charged by roentgenologists in almost any other city in the United States, and the cause for any discontent as regards the payment of fees must be sought for in another quarter.

Dr. Selby expressed his indebtedness to Dr. Pfender for his clear presentation of the subject. Much has been said in x-ray organizations about these matters and there is much diversity of opinion. It is difficult to decide how much information ought to be given the patient ; this must be decided in coöperation with the referring physician. It may be said that an exhibition and explanation of the plates is often of value in helping a patient to decide whether he will accept operative treatment. Dr. Selby rather thought that prints or plates ought not to be given to patients ; but it is often of value to give prints or plates to the physician for his own study. The giving of plates involves much expense and prints are not always dependable. It seemed to him that there is no difficulty about securing for the roentgenologists all due recognition as specialists and consultants.

Dr. Simpson could add nothing to the discussion, as he uses the x-ray only therapeutically ; he could add testimony, however, to the fact that the expense of x-ray work is terrible.

Dr. W. P. Carr wished to say a few words from the standpoint of the surgeon and practitioner. He had always had most pleasant relations with the x-ray men ; he is always quick to send suitable cases to the roentgenologist for examination, and is often glad to accept his advice as to interpretation of plates or as to treatment. But as to the status of the roentgenologist as consultant, he is like any other consultant, he may give advice, but the principal may take the advice or not. As for Dr. Carr, he preferred to see plates, pictures, cultures of sections himself ; there had been occasions when it was necessary to correct the diagnosis of the consultant. The patients sent by him to the x-ray laboratory may be divided into three classes : (1) those sent for diagnosis ; in these cases, the roentgenologist becomes the principal, Dr. Carr becomes the consultant; (2) cases in which he desires a single picture for a definite purpose ; in such cases the roentgen-

ologist is merely the expert radiographer; (3) cases sent for treatment; here Dr. Carr turns the patients over to the x-ray man as he would to any other specialist.

There can be no doubt that the physician or surgeon ought to have the opportunity to see the plates upon which the roentgenologist bases his opinion.

Dr. Williams said that in many respects the discussion touched very closely his own position as a consultant; he believed, however, that just in proportion as we stick to ideas of justice and right, just in proportion to our practice of the Golden Rule, will things be kept pleasant. We all recognize the x-ray man as a consultant; but when we send a patient to an oculist, we do not ask or expect a complete diagnosis, nor does the neurologist expect to undertake to do more than to give an opinion on the neurologic aspects of the cases referred to him. The roentgenologist ought not to claim the right to make a survey of the whole situation; what is needed is strict coöperation with the referring physician. As to x-ray therapeutics, there are numerous situations where patients may be referred for definite treatment; the roentgenologist may refuse to accept such a case, or may call attention to any mistake in the kind or amount of treatment requested; but he should not undertake to deny to the practitioner the right of making his own decisions in his own cases.

Dr. Abbe said that x-ray work had shown the importance of knowing more precise facts about our patients. When cases are referred to him, he asks the privilege of making a complete examination of the patient; this assists in making the diagnosis, because x-ray plates are susceptible of as many defects as are other laboratory methods. The proper interpretation of the plates for final action should be the outcome of the consultation of all the physicians concerned in the case.

Dr. J. D. Rogers said that the x-ray man is one of the most valuable of the consultants to whom physicians and surgeons must go for special information; but just as in all team work everywhere, there must be a captain, and he should be the one who bears the final responsibility of the conduct of the case. This was clearly shown in the case of a man where the x-ray plate indicated a ureteral stone; operation was done and no stone was found. The shadow had been cast by a mole on the man's back so situated that the shadow fell over the ureter region.

Dr. W. P. Carr said that the interpetation of the x-ray man has to be corrected at times, as in the case where a practitioner called him to treat what the roentgenologist declared to be a T-fracture at the elbow, the plate showed nothing in the world except the epiphyseal line.

Dr. Jack said that every case sent to the x-ray man should be accompanied by a clinical diagnosis; the x-ray work should be for the purpose of proving or disproving that diagnosis. He was

not sure that Dr. Carr's practice of asking for only one picture in certain long bone fractures was a safe one; one view may give a very erroneous impression.

Dr. Williams suggested that the principle underlying consultation in medical practice is that the clinician seeks from the consultant not an opinion, but more information.

Dr. Van Swearingen said that in doing x-ray work he expresses no opinion to the patient and none to the clinician, unless it is requested.

Dr. Pfender was gratified at the generous discussion. The average physician knows very little about x-rays. Of course, one wishes the physicians to see the plates; the roentgenologist reserves the right, however, to make as many plates as he thinks are needed to arrive at a conclusion in the case. Dr. Pfender agreed with Dr. Jack that a clinical diagnosis ought to accompany every patient referred to the roentgenologist, or a suspected diagnosis, at any rate; but very many patients come without any diagnosis at all, suspected or otherwise. The doctor does not always know what he wants done or what he needs to find out. In speaking of the opinion rendered by the roentgenologist, he did not mean advice as to what to do; he meant only an opinion as to what is present.

"ERNEST PENDLETON MAGRUDER—AN APPRECIATION."*

By Ethan Flagg Butler, M. D.,

Late Director American Red Cross, Serbian Unit No. 2.

Mr. President and Members of the Medical Society of the District of Columbia:

It is my privilege tonight to pay my tribute to the memory of one of your colleagues, Ernest Pendleton Magruder, of Washington, D. C., who was one of the five American physicians and surgeons to lay down their lives in Serbia during the typhus epidemic that swept over that country in the early part of 1915.† For me it is a very sad duty, as Dr. Magruder was a particularly close friend of mine during those trying days, and in the four and one-half months that we were associated together I became very deeply attached to him. I realize that already there have been presented to this Society resolutions embodying his past career in this country and a brief summary of the events leading up to his illness and death in Belgrad, Serbia, on April

*Read before the Medical Society November 10, 1915.

†They were: Drs. Albert S. Cooke, John M. Kara, James Francis Donnelly, Ernest Pendleton Magruder and Leon Weiss.

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8, 1915, yet so great was my affection for him that I consider it not out of place to express before you my own appreciation of the man and also give a more detailed account of the nature of his work in that country and of the conditions under which it had to be carried forward.

He was especially well fitted for the post which he filled, a post demanding of its incumbent both executive and surgical ability. Born in Upper Marlboro, Md., on October 23, 1871, his early education was completed in Maryland and the District of Columbia. In 1895 he was graduated A. B. from the Johns Hopkins University. In 1900 he received the degree of Master of Arts from Columbian University (now the George Washington University) of Washington, D. C., and in 1902 he was graduated in Medicine from the same University. In addition to carrying on a private practice in Washington, D. C., he occupied the chair of Clinical Surgery in Georgetown University of this city and was Associate Surgeon at the Georgetown University Hospital. He was also Associate Surgeon at the Emergency Hospital and served in addition for four years as Superintendent of that institution. Besides being a member of the local Washington Medical and Surgical Societies he was also a Fellow of the American Medical Association and a Fellow and Founder of the American College of Surgeons. He contributed frequently to the medical journals and traveled extensively among the leading clinics of Europe and America.

Then suddenly came the great war with all the desolation and suffering that followed in its wake. To Dr. Magruder it was a summons to help among the sick and wounded, and he offered his services to the American National Red Cross at the very time that Serbia was calling insistently on that organization for additional American surgeons and nurses to aid in the care of the thousands of wounded within its borders. Already Serbian Unit No. 1, composed of three surgeons and twelve nurses, had been sent there in September, 1914, and, under its Director, Dr. E. W. Ryan, was located at the Military Hospital in Belgrad. In response to this urgent appeal from Serbia, Units Nos. 2 and 3, to consist altogether of six surgeons and twelve nurses, were organized, and Dr. Magruder was selected as Director of Unit No. 3, and also made Disbursing Officer for both units. The party sailed from New York for Serbia, via Greece, Nov. 21, 1914.

He fully appreciated the risk that lay ahead of him, and went into the work with his eyes open to the possibilities of sickness and death that faced him, but he faltered not in his going.

On arrival at Saloniki, Greece, whence the party was to proceed by rail into Serbia, it was learned that a union could not be effected with Unit No. 1, at Belgrad, as that city was in the

hands of the Austrians and all communication from the South had been interrupted. Thus the advantages of working within the well constructed military hospital of that city were lost to Units 2 and 3. Instead, the Serbs urgently besought the party to proceed without delay to Gevgelia, a small town near the Serbo-Greek frontier, and there assume the charge of a hastily organized reserve hospital, already filled with patients, but as yet unprovided with medical or surgical staff. After consideration this was done.

Inspection of the post showed the "Reserve Hospital" to be a large tobacco factory, with great, bare lofts and unpartitioned space. Only by a stretch of imagination could it be called a hospital. As a matter of fact there was only one hospital, worthy of the name, in all Serbia, the Military Hospital at Belgrad. Into this tobacco factory, capable of holding not more than 750 patients on a rational apportionment of floor space, had been huddled 1,300 wretched beings, in filth indescribable. The majority of these were suffering from badly infected compound fractures, the result of shrapnel. By actual count there were 192 beds, many of which required propping to keep them on their legs. Of mattresses, blankets, sheets, there were too few. A little corner of the basement, about 25 feet square, filled chiefly by stairways, was serving as laundry, presided over by six very dirty peasant women. Needless to say, it was inadequate to meet the demands made upon it. In another part of the basement was a huge pile of exceedingly filthy clothes from the wards above, and next this were stacked the supplies of food to be served later to patients and staff, after passage through the squalid little shed that was called kitchen. Water came from shallow surface wells. It was turbid and smelled and tasted badly. Subsequent examination showed evidence of sewage pollution in several of these wells. Excreta, sputum and pus soaked dressings were scattered everywhere within and without the building. Vermin, especially the body louse, were omnipresent. The stench of the whole thing was overwhelming.

In addition to the compound fractures and other surgical conditions, with almost every case complicated by infection, there were cases of dysentery, smallpox, relapsing fever, tuberculosis, and sporadic cases of typhus. There had been from the start an effort on the part of the Serbian authorities to isolate these cases, but their endeavors were not crowned with any marked success. Rather, these Serbs displayed a profound ignorance of hygiene and sanitation, and a notable degree of inefficiency.

The town of Gevgelia was one of those wrested from Turkey in the First Balkan War. It was primitive, rather dirty, and much more likely to appeal to the explorer than to one in search of a suitable location for hospital headquarters. In the poor

accommodations of some dilapidated, Turkish-built hotels, the Units were quartered. The general discomfort and danger to health occasioned by lack of running water, very crude toilet arrangements, leaky roofs, overcrowded rooms, lack of heating facilities and the necessity of locking up all personal belongings whenever the rooms were left, rendered necessary an early change to better quarters in commandeered buildings. The environs of the town were extremely pretty, but the work of the party did not lie in the environs.

Such were the conditions that faced Units 2 and 3 and their directors upon arrival at Gevgelia, the scene of their labors. Of surgical and medical work to be done there was any amount, but of facilities under which to carry it out in safety to patient and physician there were none. The urgent need of the moment was for a suitable hospital, to be secured either in a commandeered building or in the "Tobacco Factory," cleaned and made over. On Dr. Magruder fell the burden of devising means for coping with the conditions within the "Tobacco Factory," and of searching for other buildings that could be converted into serviceable hospitals. In a remarkably short space of time he had the reorganization of the "Tobacco Factory" well under way, and order and cleanliness were beginning to appear where chaos and filth had held undisputed sway. In a corner of the first floor there appeared an operating room and a dressing room. Cases that had lain for a week or more without a change of dressing began to receive daily care under his skilled supervision. Cases in very urgent need of operation received the benefit of his experience. Better yet, he located a building well adapted for hospital purposes, in which selected surgical cases could be cared for. Slowly, and in spite of obstacles that were sometimes hard to overcome, this building, the "Hotel Magazine," as it came to be known, was prepared for the reception of patients. It was no beautiful palace, but Magruder founded it on the basic principles of American Surgery, and it stood for things that had not obtained in Gevgelia prior to the arrival of the American party—asepsis, protection from avoidable diseases, rational feeding of patients, consideration for the individual. Here it was possible to do not only the operations urgently demanded as life-saving measures, but also to undertake corrective work on the manifold deformities that were to be found among the sufferers. It was gratifying to note how eagerly these wretches came to seek the benefit of his skill.

In spite of the adverse conditions present in the "Tobacco Factory," in spite of the disheartening effect that they must naturally have exercised upon him, in spite of the miserable quarters in which the hours of rest were passed, Dr. Magruder preserved an optimism and a bright outlook on the future that

helped immeasurably to keep up the morale and enthusiasm of the entire staff. In particular he was most considerate of the nurses, who, as a whole, behaved admirably under conditions which were really too revolting for American women to be subjected to. For his patients he was ever zealous, striving how to obtain the best results and the greatest comfort for them. I could well appreciate his mental attitude on these questions, for he and I roomed together in that country and together mapped out the work and policies of the Units. Never did I know him to lose heart, though there were days when we both felt some misgivings of the future. And there were days when a severe bronchitis, fostered by the miserable winter climate of southern Serbia, would force him into bed. His calm, rational manner of facing the numberless problems that arose, and his clear-headed advice were of the greatest value in planning for the protection of the personnel of Units and other executive work that we shared as the directors of the party.

But his thoughts and ideals on all the work are best reflected in his own words, in notes found among some papers after his death. They will best tell from what standpoint he viewed it, and what impression it all made upon him:

"This great war, when one closes one's eyes to its horrors, is quite educational in its influence upon medical science because of the new and special nature of its aspects, especially those referred to the army. Formerly the surgeon had to treat wounds created for the most part by rifle bullets. Today his special attention is called to the frightful casualties of grenade and shrapnel. The dynamite grenade was first used at the siege of Mafeking. In the Russo-Japanese war the Japs used this modern high explosive very effectively. It is cylindrical in form, filled with high explosive powder and fitted with a time fuse and percussion cap. It bursts into many fragments and emits a gas very painful to the eyes and air passages. The shrapnel is a projectile fired from a gun and carrying a large number of bullets. At the point of bursting the bullets are charged with an added energy over a wide area. It is the main reliance in the present war's field artillery. It is most effective against large bodies of troops in masses, in mountain and field artillery, as well as in repelling attacks against besieged fortifications. Its casing is a steel tube with a solid base. The 3-inch field gun shrapnel weighs 15 pounds, its length is ten inches and its muzzle velocity 1,700 foot seconds. It contains 252 round bullets made of hardened lead. It is called a man killer at 6,500 yards. But it has even then, on bursting, a remaining velocity to the bullets of 865 foot seconds. The fuse is gauged to make the projectile explode at the fractional part of a second in its flight.

"The preponderance, therefore, of artillery in the present war is a new order of things from the viewpoint of the modern surgeon. Additional interest, too, centers in the complications of those exposed to the terrifying effects of high bursting charges of shrapnel, to aerial craft and the various types of flying machines. The genius of man at war has been challenged by the old maxim 'Familiarity breeds contempt.' And he has accepted the challenge knowing full well that man's nervous system is not made of adamant, that there is an end to nerve power, nerve endurance. Truly nerve racking as well as death dealing machinations have been the greatest study of the day. Nerve tension from waiting for and dreading an attack, extreme excitement, and mental confusion, aggravated by fatigue of mind and body, and the ever present menace of exhaustion; these have been calculated by man with mathematical precision, embodied in machines of death turned loose from hell to execute his purposes. Hence the moral and mental nervous wrecks you meet and those suffering functional effects from the nearby explosion of a large shell, for example, the temporary loss of speech and hearing.

"In addition to these are the terribly mutilating wounds of flesh and bone further complicated by infection. These shrapnel wounds also give rise to the most virulent forms of sepsis. The present-day rifle bullet travels so fast that it is sterilized by the heat generated by the friction caused by the velocity of its flight. A wound by such a bullet, if it carry in no clothing or other septic matter, may heal promptly, whereas the bullets carried within the shells of shrapnel frequently give rise to the most virulent form of infection, known as spreading gangrene. This requires quick amputation of the member, and isolation to prevent its spread to the other men in the ward. Modern treatment is powerless to control this form of blood poisoning in a badly infected case, and I am now testing some of the latest discoveries in antiseptics in the hope of finding an effective remedy against this old scourge of hospitals which Lister buried and which the modern shrapnel has brought back to life resurrected and intensified. I have only time to mention a number of severe cases of lock-jaw, of frost bite, requiring the amputation of one or both feet, sometimes of one or both legs, and a large hernia of the brain following a compound shrapnel wound of the skull. The recovery of that patient following operation has been to me the most interesting and gratifying of all my cases. On the whole the work of the Mission has been very hard, but the consciousness of the relief of awful suffering in its many manifestations, and the correction of terrible deformities, has greatly lightened our labors."

In another place he had also noted: "The work has been so heavy altogether with converting buildings into hospitals, organi-

zation of the whole plant, sanitation, care of the sick and wounded,—we began with thirteen hundred patients, mostly surgical,—that when night came one could only tumble into bed, hoping that the work of the morrow would be less tiring. Until lately, when the medical cases have far outnumbered the surgical, we had, among other things, an endless variety of compound fractures, gunshot wounds of the skull, chest, abdomen, arms, thighs and legs, amputations single and double, aneurysms of the common carotid, subclavian, axillary, brachial and femoral arteries, fecal fistulae, and the extraction of the greatest variety of shot and shell, bullets, shrapnel, grenades, dum-dum; one case of cerebral hernia, an exceedingly interesting case to me—on the whole the work has been wonderfully interesting. There are many things that I would like to speak of, but the censorship here in the war zone of course prohibits. The town normally has about 7,000 inhabitants. The surroundings are pretty indeed, especially as one glimpses the rising sun's rays reflected back from the snow-capped mountain tops. Saloniki (old Thessalonika), Greece, upon the Aegean, is only four hours' run by the train, so that we do not feel cut off entirely from the outside world; but Dr. Ryan has asked us to join him in Belgrad, and if I do, which is likely within the next three weeks, I expect I shall be quite cut off from communications. But, on the other hand, the hospital there will be quite new and equipped with all the modern conveniences, I am told."

Typhus was present in sporadic cases even when Units 2 and 3 first reached Gevgelia, and caused some anxiety, but it was fully a month before the great epidemic that overwhelmed Serbia broke out. The two Units were hard hit. Of the twelve nurses, nine had contracted the disease prior to the end of February. All recovered. Of the six surgeons, four had become infected, and of these, one, Dr. James F. Donnelly, had died. Dr. Magruder and myself had escaped the typhus. When the epidemic swept through the personnel of the Units of necessity much of the hospital work came to a standstill, and attention was perforce centered upon the sick Americans. It was but natural that blood and racial ties should assert themselves, and first heed be paid to fellow countrymen and women. Magruder was unremitting in his share of the care of the staff invalids, nor did he spare any efforts, regardless of the amount of exposure incurred thereby. For nearly two months the toil continued, before the convalescents could be started on their way to America. Those who had escaped during that period seemed almost to have demonstrated a natural immunity to the scourge. We were almost ready to congratulate ourselves not only because we had not had typhus, but also because we were not going to get it.

The affection with which the personnel of the Units regarded

him appears in an article published by one of the staff physicians, a typhus convalescent, after being invalided home to America:

"One after another of the American nurses and doctors was taken, until about ten were stricken and only Doctors Butler and Magruder, with three nurses, were left to take care of them. Dr. Magruder was later taken. He died. . . . To him (Dr. Butler) and to Dr. Magruder, who died in their service, those members of the Units who have recovered, are grateful beyond measure for having saved their lives, in the unassuming sincerity with which the medical fraternity regard each other's acts of courage."

Unit 1, at Belgrad, once more in full communication with the rest of Serbia, had been depleted by the return of some of its original members upon the expiration of their period of service. As soon as the convalescents of Units 2 and 3 had been safely established in Saloniki, Greece, whence they could start on their homeward voyage, the five survivors intended to change their location from Gevgelia, the "Pest hole of Europe," as one observer described it, to Belgrad, there to join with Unit No. 1, and also to secure the protection for themselves and improved working conditions that the really adequate Military Hospital would afford them.

With Dr. R. M. Kirby-Smith, of Tennessee, who, together with three nurses, had come from the American Red Cross Units at Pau, France, in answer to the urgent call for volunteers to go to the assistance of Units 2 and 3, I left Gevgelia on Saturday, March 20th, en route for Belgrad, to prepare the way for the other members and the property of the Units. Magruder was perfectly well when I left him. We reached Belgrad even as the staff epidemic of typhus broke out in Unit 1. It was imperative to hasten the arrival of the Gevgelia survivors and the stores. That task fell on Magruder. The packing of the stores was hardly commenced before he developed the headache and high fever that characterized the onset of typhus. The stores could have been left behind, secured by lock, and time saved in getting Magruder on to the hospital and proper care. He would not tolerate the idea. In his hands had been left those stores and he would not betray the trust imposed on him—a trust representing not only the financial value of the materials but also their value, as being the only stores available to the Americans, to aid them in the furtherance of their work and their own protection. With a singleness of purpose, for two days he labored on, himself supervising, the orderly packing of the chests and the loading of the freight cars. Not until that was all accomplished did he commence the fatiguing two days' journey from the old location to the new. He was in the fifth day of typhus when he reached Belgrad.

Fatigued as they were with the care of the other typhus cases, the three nurses who had come up with him from Gevgelia were only too eager to forego their well-earned opportunity for rest, and devote their energies to his case. They appreciated fully the unselfish efforts that he had bestowed on their sick colleagues and wished to show their gratitude. "We want to do all we can for Dr. Magruder, for you know he was awfully good to us," said one of them.

At first it seemed as though he would recover, but on the eleventh day of his illness the overwhelming toxemia began to show its full effects and it became apparent that we could not save him. At seven o'clock on the morning of Thursday, April 8th, 1915, he died, a real martyr to the work that he had undertaken and the organization to which he had given, and maintained, his allegiance.

So passed out Ernest Pendleton Magruder—to me a proved friend, always loyal, ready ever with counsel and advice—a surgeon, giving freely of his skill and sympathy to those who could never repay him for the efforts expended on their behalf—an American, honorably fulfilling the trust imposed upon him by the American Red Cross, and honorably upholding, in the foreign war zone, the ideals of one of the noblest institutions of his native land—a Christian, of the true type that feared not to face death that others might profit by his labors.

Dr. Kober wished to express his personal appreciation of this just tribute to the memory of our departed colleague. The sacrifice of Dr. Magruder's life and the entire setting of circumstances which brought about this sacrifice are not without their lesson: that there could be on the earth such wholesale bloodshed is all because the people still believe in war. He believed with Dr. Meltzer, of New York, that the medical profession of the world is the custodian of the solution of the matter; the medical profession alone of mankind is non-combatant, and everywhere its mission is the healing of man, equally for friend and foe. Our position and our opportunity are, therefore, unique and lead to the important duty of inculcating the idea everywhere that wholesale slaughter in war is as immoral as is murder for private ends; it is our duty to preach this idea until the people of the earth no longer believe in war. He urged physicians to become members of the Fraternitas Medicorum and thus add to the volume of influence of an organization whose purpose is the creation of a popular sentiment against war.

In Memoriam.

DR. CHARLES GRANVILLE STONE.

The committee appointed by the President of the Medical Society of the District of Columbia respectfully submits the following resolutions upon the death of Dr. Charles Granville Stone:

Dr. Stone was born in Frederick County, Maryland, in 1846. In early manhood he studied dentistry and practiced his profession with marked success in Rockville, Md. In 1870 he matriculated at the University of Maryland School of Medicine, in Baltimore, whence he graduated in 1872.

Beginning practice near Sligo, in Montgomery County, Maryland, he soon became very popular as a physician, and was justly so, as he was very successful in his practice.

His home being in the District of Columbia, he was appointed by the District as physician to the poor, to whom he ministered faithfully and tenderly for several years.

For many years of his active and useful life he served as chief surgeon of the Washington Railway and Electric Company. In this position he remained until age and ill health compelled him to retire.

Dr. Stone was a cheerful man socially and an efficient man in his profession, and those who knew him well will feel his loss.

WHEREAS, the Medical Society of the District of Columbia has lost an efficient and active member,

* *Be it resolved*, That this loss will be felt by this Association, and be it further

Resolved, That a copy of this resolution be spread upon the minutes and a copy sent to the bereaved family.

(Signed) J. W. CHAPPELL,
CHAS. L. WATERS.

PROCEEDINGS OF THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA.

Wednesday, November 3, 1915.—Stated meeting. The President, Dr. Frank Leech, presided; about 85 members present. The Treasurer reported for October, receipts, $205.00; disbursements, $200.00. The President announced the death Nov. 2d of General Geo. M. Sternberg, U. S. Army, Retired, an honorary member of the Society, and appointed as a memorial committee, Drs. Kober, D. O. Leech and G. Wythe Cook.

The names of the following candidates for active membership were referred to the Committee of Censors: Kate Breckenridge

* Adopted by the Medical Society November 24, 1915.

Bogle, Johns Hopkins University, 1914; Enrico Castelli, University Bologna, Italy, 1898; Arturo Luis Guerra, Georgetown University, 1914; Josiah Baker Henneberger, George Washington University, 1913; Helen D. Clarke Kempf, Johns Hopkins University, 1913; Albert Sidney Maddox, Bellevue Hospital Medical College, 1890; J. W. Mankin, College Physicians and Surgeons, Baltimore, 1906; Wm. Berry Marbury, University Virginia, 1909; Chas. Haddon Sanders, Georgetown, 1912.

For associate membership: Cary Travers Grayson, Passed Asst. Surgeon, U. S. Navy; Walter David Hunter, Bureau Entomology, Dept. Agriculture; Archibald Magill Fauntleroy, Surgeon, U. S. Navy; Arthur M. Whaley, Captain, Med. Corps, U. S. Army; A. W. Williams, Major, Med. Corps, U. S. Army.

Dr. G. Wythe Cook, for the Executive Committee, made the following recommendations, which were adopted:

1st. That the correspondence between Dr. James M. Barber and the Commissioner of Internal Revenue for the District of Maryland be referred to Mr. Burton, the Counsel for the Society, with the request that he interview the proper officials of the Treasury Department in regard to the interpretation of the law touching physicians' prescriptions for narcotic drugs.

2d. That an honorarium of $100.00 be paid to Mr. Ralph Burton, the counsel of the Society, for services already rendered, and that he be informed that the amount in no way compensates him for his services, and that it is intended merely as an expression of appreciation of this Society.

3d. That a resolution proposed by Dr. T. A. Williams, looking to greater activity of the Public Instruction Committee, be laid on the table.

4th. That Mr. Edwin Smith be informed that regulations governing the vaccination of public school children do not come within the jurisdiction of the Society; that it is a matter of municipal regulation.

5th. That the President be authorized to appoint three surgeons to represent the Society in the work of the American First Aid Conference.

The President appointed the following to represent the Society in the First Aid Conference: Drs. C. S. White, H. H. Kerr and W. P. Reeves.

The following were elected to active membership: Ferdinand Henry Mistretta, Georgetown University, 1914; Edward Lloyd Morrison, Jefferson Medical College, 1905; Wm. Clark Sparks, University Virginia, 1908. Surgeon General W. C. Gorgas, U. S. A., was elected an honorary member.

Dr. D. S. Lamb read a paper on "The History of the Army Medical Museum," the occasion being the fiftieth anniversary of his appointment to that institution. Discussed by Drs. Garrison, Schaeffer, Hodge and Kober. A rising vote of thanks was given to Dr. Lamb. See page 15.

Wednesday, November 10.—The President presided; about 125 members present.

Dr. Ethan Flagg Butler, late Director of American Red Cross, Serbian Unit No. 2, addressed the Society in "An Appreciation of Dr. E. P. Magruder." See page 49.

Dr. R. U. Patterson, Major, M. C., U. S. A., Director Medical Department American Red Cross, and Dr. Kober discussed the paper. On motion of Dr. S. S. Adams a rising vote of thanks was given to Dr. Butler.

Dr. Louise Tayler-Jones told of her recent experience in Serbia, and Dr. Butler gave some details of the housing and other living conditions in that country.

Wednesday, November 17.—The President presided; about 75 members present.

A letter from Mr. H. Ralph Burton, counsel for the Society, was read, thanking the Society for the honorarium sent to him.

A letter from the Secretary General of the Pan-American Scientific Congress was read, asking the Society for the appointment of a delegate and alternate.

The President announced the death of Dr. J. P. Dunnigan and appointed the following memorial committee: Drs. Harrison Crook, C. R. Luce and Francis McQuillan.

The death of Dr. Charles G. Stone was also announced and Drs. L. J. Battle, C. L. Waters and Chappell were appointed a memorial committee.

Dr. Jack presented a patient cured of actinomycosis of the jaw, with history of the case. Discussed by Drs. Crane, Kinyoun and Jack.

Dr. C. M. Dollman presented a patient recovering from general syphilitic myositis, with report of the case. He also showed a specimen of amputation in lower third of thigh because of osteo-arthritic ankylosis of knee, followed by elephantiasis of leg and foot.

Dr. H. H. Hazen gave lantern slide illustrations of the less common skin diseases. Discussed by Drs. Kinyoun, Folkmar and Hazen.

Wednesday, November 24.—The President presided; about 60 members present.

Dr. Waters, from the Memorial Committee, reported resolutions of respect to the memory of Dr. Charles G. Stone, which were adopted. See page 58.

A letter from Surgeon General Gorgas was read, thanking the Society for electing him an honorary member.

The President appointed Dr. J. B. Nichols to represent the Society as delegate to the Second Pan-American Scientific Congress; Dr. Wall as alternate.

Dr. D. S. Lamb showed bone specimens of *actinomycosis* in cattle, and said that the disease was more common in cattle than in other animals; was usually contracted through the entrance of the ray fungus into some injured part, especially an injured gum or salivary gland. The fungus is found on hay, straw, grain and grass. In the human subject the disease is usually contracted by those who attend to cattle or horses. Many cases of actinomycosis in cattle had been diagnosed as osteosarcoma. The usual treatment for the disease is to try the effect of iodine in some form, and if that fails, then to slaughter the animal.

Dr. Lamb showed specimens of *dentigerous cyst;* the specimen in each case had been removed by operation, and from a young person. In each case the disease had been caused by a misplaced tooth. One case was operated on by the late Dr. Johnson Eliot, of this Society, and was presented to the Museum by his son, Dr. L. Eliot. Apparently the only effective treatment is operative.

Dr. Kober said that actinomycosis must be included among the occupational diseases; human cases are mostly to be found among husbandmen and, according to German clinicians, may be attributed in part to the habit, common with farmers, of chewing straws.

Dr. Simpson said that actinomycosis is not confined to farmers; he had had in the past year or two, two cases of this disease referred to him for x-ray treatment; one of these patients was an oyster-house keeper, the other was a woman. He had recently had a case of sporotrichosis in a woman who had not been outside the city of Washington for two years preceding the occurrence of the disease.

Dr. Lamb said that this disease is most often found among persons associated with cattle. Usually the lesions occur about the head and particularly the jaw; but this is not necessarily so; they may be found anywhere in the body.

Dr. T. A. Williams said that if a dentigerous cyst is due to the development of a true embryonic rest, it should be susceptible of liquefaction by x-ray treatment, and the mutilating surgical operations spoken of by Dr. Lamb would be unnecessary.

Dr. Jack said that the specimens served to illustrate the recent growth of knowledge of pathology and of improvement of surgical methods in the light of that knowledge; it is not necessary to mutilate the jaw in the surgical treatment of dentigerous cysts; all that is required is to remove the outer wall of the cyst and the included tooth.

Dr. Selby was much interested in the specimens. Some surgeons are still disposed to insist on removing parts of the jaw for dentigerous cysts, but it has been repeatedly demonstrated that, conservative curettment is usually sufficient. Reports of x-ray treatment of these cysts have been made and they indicate that cure may be effected in this manner; for the present it is, perhaps, best to remove the outer wall of the cyst, curette the interior and

follow by x-ray exposures, several moderate doses of the filtered rays. He inquired if anyone had heard of the occurrence of cysts of the teeth themselves. He had under observation a case in which the x-ray plate indicates something which looks like a cyst of a second unerupted molar tooth.

Dr. Lamb could give Dr. Selby no information in regard to the occurrence of cysts of the teeth; he had never seen such a specimen, would like very much to see one.

Dr. W. P. Carr reported a case of complete *bony ankylosis of the jaw*, relieved by operation, and showed the patient. Discussed by Drs. A. B. Cooper, Shands, Williams, Jack, Lemon and Carr.

Dr. C. A. Pfender read the paper of the evening; "The roentgenologist as a consultant; his rights, privileges and responsibilities." Discussed by Drs. Selby, Simpson, Carr, Williams, C. W. Richardson, Abbe, Rogers, Jack, Van Swearingen and Pfender. See page 41.

Wednesday, December 1.—The President presided; about 225 members present.

The President announced the death of Dr. Thomas Miller and appointed as a memorial committee Drs. Jenner, Balloch and Lamb.

A letter from the Council of Health and Public Instruction, A. M. A., was read, requesting the appointment of a member to represent the Society on the National Legislative Committee. The President was authorized to make the appointment.

The Treasurer reported for November, receipts, $140.00; disbursements, $160.21.

The following officers were elected for the year 1916: President, E. Y. Davidson; First Vice President, J. D. Rogers; Second Vice President, I. S. Stone; Recording Secretary, H. C. Macatee; Corresponding Secretary, A. L. Hunt; Treasurer, C. W. Franzoni; Delegate to A. M. A., G. Wythe Gook; Alternate, P. S. Roy; Members of Executive Committee to serve three years, Frank Leech, R. T. Holden and W. M. Barton.

Wednesday, December 8.—The President presided; about 200 members present.

The President appointed Dr. L. B. T. Johnson a member of the National Legislative Committee.

Dr. D. S. Lamb, from the Committee on Publication, asked appropriation of $215.45 for the November ANNALS and stated that the unusual sum was due to the large size of the number; he also mentioned the fact that the cost of making corrections was large because of the want of proper consideration on the part of authors of papers and those who took part in discussions. The bill was ordered paid and, on motion of Dr. Kober, the matter of

corrections was referred to the Executive Committee for consideration.

The dues of Dr. F. V. Brooks for the current year were remitted, because of his illness.

Dr. M. F. Thompson reported a case of *foreign body in the intestine*, with the specimen.

Dr. T. C. Martin gave a motion picture clinic in proctology, showing methods of examination and minor operations. Discussed by Drs. W. C. Borden, L. Eliot, S. S. Adams, Hagner, Sprigg and Martin.

Wednesday, Dec. 15.—The President presided; about 85 members present.

An appropriation of $38.37 for printing program cards, and one for $3.00 for stationery for the Treasurer, were made.

Authority was given the Corresponding Secretary to invite Mr. Frederick Fenning, of Washington, to address the Society on some medico-legal subject, and to invite Dr. Taliaferro Clark, of the Public Health Service, to make an address on Trachoma in the United States.

Vice President Stavely took the chair and the President, Dr. Frank Leech, delivered his presidential address for the year 1915. The address included a paper on Scarlet Fever, which was discussed by Drs. Claytor, Wall, Woodward, Chappell, Masterson, Frankland, Hunt, Glushak, Williams, Macatee and Leech. The recommendations contained in the address were referred to the Executive Committee. See page 1.

Dr. Leech was given a vote of thanks for his able and efficient services as President during the year.

Mrs. Goodwin: I wish to select a present for my husband, and I can't find anything suitable. He doesn't smoke or drink, nor go out nights or play cards.

Salesperson: Is he fond of fancy-work?

Only the brave deserve the fair, but the rich get them.

If you make a mistake in choosing your second wife it is obvious you didn't deserve to lose your first.

Matrimony is a chemical laboratory full of explosives.

All widows advocate divorce—it puts husbands into circulation.

Love is blind, but marriage is a good occulist.

A widow and her weeds are soon parted.

Marriage is like port wine. It's apt to make you very dull.

—*Med. Council.*

WASHINGTON MEDICAL ANNALS.

Journal of the Medical Society of the District of Columbia.

Published Bimonthly by the Society, at No. 2114 Eighteenth Street, N. W., Washington, D. C. Subscription price, including postage, $1.00 per year, in advance. Single copies, 20 cents. Advertising rates given on application.

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Editorial.

HISTORY OF THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA.—Price $1.00, with 25 cents added if delivered in this city or sent by mail. Address Dr. C. W. Franzoni, 605 I Street, N. W. The books are in the custody of Dr. D. S. Lamb, at the Army Medical Museum.

THE WASHINGTON MEDICAL ANNALS, the official organ of the Medical Society of the District of Columbia, issued the first of January, March, May, July, September and November, will publish gratuitously such information of a medical, surgical and sanitary character, changes in personnel, &c., of hospitals, dispensaries, medical schools, medical societies and other medical agencies, as would be useful and interesting to the members of the Society. Address the Chairman of the Committee on Publication, Dr. D. S. Lamb, 2114 Eighteenth St., N. W.

THE WASHINGTON MEDICAL ANNALS.—Back numbers.—Members of the Society who have back numbers of the ANNALS, and do not intend to preserve them, are requested to send them to the Chairman of the Publication Committee. Requests for such numbers are frequently received. Address Dr. D. S. Lamb, Army Medical Museum.

SPECIAL NOTICE.—Members of the Society whose biographical sketches were published in the History of the Society, are requested to send to the Chairman of the Historical Committee, Dr. D. S. Lamb, 2114 18th Street, N. W., any data that they would like to *add* to what was printed in the History. There is no restriction as to the extent or character of the data, provided only that they are personal.

Members who were related to or well acquainted with *deceased*

members or those who *resigned* from the Society, are requested to look over the sketches of those deceased or resigned, and send desirable data to the Chairman, as above.

Members who have joined the Society *since the publication* of the History, and whose names do not therefore appear therein, are similarly requested to send to the Chairman such personal data, corresponding in quantity and character to the sketches in the History. Attention is particularly desired to be paid to degrees conferred, the year when and institution by which conferred.

SPECIAL NOTICE.—The Medical Society, January 5th, to avoid the expense of unnecessary alterations in the proof sheets of the WASHINGTON MEDICAL ANNALS, ordered that alterations, except for typographical errors, should be at the expense of the authors.

Attention is especially invited to the necessity of members sending *promptly* to the Editor the discussions that they receive from the Recording Secretary, if they make any alterations in the discussions. Delay in this matter may prevent the alterations being printed.

THE OTHER MEDICAL SOCIETIES OF THE DISTRICT OF COLUMBIA.

CLINICAL SOCIETY.—Officers: F. L. Biscoe, President; W. J. Mallory, Vice President; E. P. Copeland, Secretary-Treasurer; Censors: L. A. Johnson and J. D. Thomas.

CLINICO-PATHOLOGICAL SOCIETY.—Active membership limited to 25. Inactive membership: those who have withdrawn from active membership after fifteen years. A limited honorary membership of eminent medical men. Meets on the first and third Tuesdays of the month from October to May, inclusive. Officers: President, G. Brown Miller; Vice Presidents, Loren Johnson and H. H. Kerr; Secretary and Treasurer, B. M. Randolph.

EMERGENCY HOSPITAL CLUB.—The club was organized early in 1915 by the members of the Staff of the Central Dispensary and Emergency Hospital. Meetings are held on the second Saturday of each month from September to May, inclusive; the officers are Ernest F. King, President; W. B. Carr, Vice President; D. W. Prentiss, Secretary and Treasurer.

FREEDMEN'S HOSPITAL MEDICAL SOCIETY.—Meets on the second Wednesday of each month from October to May, inclusive. Composed of physicians connected with the Staff of the Hospital and the Medical Faculty of Howard Medical School. E. A. Balloch, President; S. L. Carson, Vice President; C. A. Allen, Secretary-Treasurer.

GALEN SOCIETY of the District of Columbia.—Wm. H. Littlepage, President; Harry A. Ong, Secretary.

GEORGETOWN CLINICAL SOCIETY; twenty-five active members, limited to graduates of the Medical Department of Georgetown University. Meets at the University Club on the third Tuesday in the month. John Foote, President; J. Russell Verbrycke, Jr., Treasurer.

GEORGETOWN UNIVERSITY MEDICAL SOCIETY.—Meets on the fourth Saturday of the month at the University Hospital. The membership consists of the Alumni, Faculty and Senior Students of the Medical School. J. A. Gannon, President; T. F. Lowe, Vice President; J. M. Moser, Secretary-Treasurer.

GEORGE WASHINGTON UNIVERSITY MEDICAL SOCIETY.—Organized 1905, membership limited to Alumni of School and Members of the Faculty. Meets in the Medical Building on the third Saturday of each month from October to May. President, E. P. Copeland; Vice President, W. H. Huntington; Treasurer, E. G. Seibert; Secretary, C. B. Conklin; President's Council, J. B. Nichols, W. W. Wilkinson, A. L. Hunt, J. Lawn Thompson, John Van Rensselaer. Active membership, 162.

HIPPOCRATES SOCIETY, membership limited to 25, with voluntary retired members after 10 years, meets on the second Thursday of the month from October to May. Officers for the year: J. R. Verbrycke, Jr., President; C. A. Simpson, Secretary.

MEDICAL HISTORY CLUB of Washington, D. C.—Officers: President, Frank Baker; Vice President, H. W. Lawson; Secretary, F. J. Stockman; Executive Committee, J. H. Bryan, Howard Hume, W. J. Mallory and the Officers. Members: Truman Abbe, Frank Baker, W. C. Borden, Joseph H. Bryan, G. Wythe Cook, John Foote, F. H. Garrison, Howard Hume, H. W. Lawson, W. J. Mallory, John B. Nichols, P. S. Roy, F. J. Stockman, I. S. Stone, John D. Thomas, Wm. A. White.

Program 1916.

Date.		*Essayist.*	*Host.*
January 29.....	"Coins and Medals in Medicine".....	Dr. Mallory.	Dr. Hume, 1830 Jefferson Place.
February 26....	"American Medicine of the Eighteenth Century".....	Dr. Cook.	Dr. White, Government Hospital for Insane.
March 25.....	"Joseph Leidy"	Dr. Garrison.....	Dr. Stockman, 1122 Girard Street.
April 26.....	"The History of Body-snatching.....	Dr. Baker.	Medical Society of the District of Columbia.

MEDICAL AND SURGICAL SOCIETY of the District of Columbia.—President, Wm. F. Sowers; Vice President, J. T. Kelley; Secretary and Treasurer, L. Eliot; Asst. Secretary, H. H. Kerr; Executive Council, John Dunlop, L. C. Ecker, H. G. Fuller, L. H. Reichelderfer and Eliot.

SOCIETY OF MEDICAL JURISPRUDENCE, Washington, D. C. —President, Dr. Wm. A. White; Vice President, R. Ross Perry; Secretary-Treasurer, Dr. D. P. Hickling. Meets on the second Monday of each month from October to June at University Club. Has from forty to fifty members.

SOCIETY OF OPHTHALMOLOGISTS AND OTOLOGISTS, Washington, D. C., meets the third Friday of each month from October until May, inclusive.

Officers: President, A. B. Bennett, Jr.; Vice President, A. H. Kimball; Secy.-Treasurer, Carl Henning, The Rochambeau.

Active members: A. B. Bennett, Jr., J. W. Burke, V. Dabney, W. T. Davis, L. S. Greene, C. M. Hammett, Carl Henning, E. B. Jones, A. H. Kimball, R. S. Lamb, F. B. Loring, O. A. M. McKimmie, W. B. Mason, M. E. Miller, Mead Moore, S. B. Muncaster, W. S. Newell, J. J. Richardson, E. G. Seibert, R. R. Walker, W. A. Wells.

Inactive members: J. H. Bryan, W. K. Butler, H. S. Dye, Wm. H. Fox, W. P. Malone, H. A. Polkinhorn, C. W. Richardson, D. K. Shute, W. H. Wilmer.

Schedule of Meetings—1916.

	Residence of:	*Paper on Eye by:*	*Paper on Ear or Throat by:*
January	Dr. Loring	Dr. Muncaster	Dr. Miller.
February	Dr. Richardson	Dr. Hammett	Dr. Moore.
March	Dr. Seibert	Dr. Newell	Dr. Richardson.
April	Dr. Hammett	Dr. Seibert	Dr. Jones.
May	Dr. Wells		Business meeting.

SOCIETY FOR MENTAL HYGIENE, DISTRICT OF COLUMBIA.—Organized at the New Willard June 3, 1915. Temporary President, Dr. Wm. A. White; temporary Secretary, Dr. D. P. Hickling. Organizing Committee: Surgeon General Rupert Blue, U. S. P. H. S., Miss Julia C. Lathrop, and Drs. White, Hickling and Frank Leech. The object of the Society is to work for the conservation of mental health, the prevention of mental disease and deficiency, and improvement in the care and treatment of those suffering from nervous and mental disease and mental deficiency.

SOCIETY OF SOCIAL HYGIENE, Washington, D. C.—President, Dr. Charles F. Stokes, U. S. Navy; Secretary, Lt. Col. J. R. Kean, U. S. Army, Surgeon General's Office. The Society has four committees, namely: Education, Venereal Diseases, Pro-

tection of Women and Children, and Psychopathology. Yearly dues, $1.00. Persons desiring to become members should address Col. Kean and state to which committee they wish to be assigned.

THERAPEUTIC SOCIETY of the District of Columbia.—Meets at the G. W. School of Pharmacy, 808 I Street, N. W., on the first Saturday in each month. G. W. Latimer, President; A. P. Tibbets, Secretary.

WALTER REED MEDICAL SOCIETY meets on the fourth Thursday of every other month, from September to May inclusive. Composed of physicians located in the eastern part of Washington. Officers: J. S. Arnold, President; H. R. Schreiber, Vice President; M. H. Prosperi, Secretary; N. E. Webb, Treasurer.

WASHINGTON MEDICAL AND SURGICAL SOCIETY.—President, N. D. Graham; Vice President, R. R. Walker; Secretary, Walter Van Sweringen; Treasurer, F. E. Gibson; Curator and Librarian, E. H. Egbert; Executive Committee: L. H. Taylor, Chairman, G. S. Clark, G. S. Barnhart; Program and Auditing Committee: Wm. A. Jack, Jr., Chairman, J. R. Nevitt, Walter Van Sweringen; Membership Committee: F. E. Gibson, Chairman, Wm. P. Reeves, Caryl Burbank.

WASHINGTON OBSTETRICAL AND GYNECOLOGICAL SOCIETY.—President, J. F. Moran; Vice Presidents, G. B. Miller, Prentiss Willson; Secretary, Truman Abbe; Treasurer, D. W. Prentiss. Retired members—G. N. Acker, S. S. Adams, E. A. Balloch, J. W. Bovée, W. S. Bowen, W. P. Carr, G. Wythe Cook, M. F. Cuthbert, H. D. Fry, J. T. Johnson, D. G. Lewis, A. R. Shands, E. E. Morse, Elmer Sothoron, J. Ford Thompson, John Van Rensselaer.

WASHINGTON SOCIETY OF NERVOUS AND MENTAL DISEASES.—President, Wm. H. Hough; Vice President, Bernard Glueck; Secretary, J. J. Madigan. The Society has a limited membership of thirty, but welcomes Physicans and Surgeons interested in Neurology and Psychiatry. Meets monthly on the third Thursday at the Cosmos Club or a member's residence.

WOMEN'S MEDICAL SOCIETY of the District of Columbia.—President, Sophie Nordhoff-Jung; Vice President, Emma Lootz Erving; Secretary and Treasurer, Martha M. B. Lyon; Corresponding Secretary, Mary Holmes.

THE SECRETARIES of the other Medical Societies of this District are reminded that the ANNALS will publish the schedules of their meetings.

AMENDMENTS TO THE CONSTITUTION AND BY-LAWS.—The following amendments have been made since the publication in Volume XII, March, 1913.

Constitution.—Article V, Section 4, adopted Nov. 4, 1914: before the words "Due notice" on page 142, insert "No application for membership that is rejected or withdrawn shall be renewed until after two years from the time of its rejection or withdrawal."

Section 10, same article; adopted Jan. 7, 1914: for "two years" substitute "one year."

Article VI, Section 5, adopted Jan. 6, 1915: in the last line, for "two" substitute "three."

Article VIII, Section 2, page 148, 4th line from top: for the word "disorders" substitute the word "diseases."

By-Laws.—Article VIII, Section 9, page 153, adopted Jan. 7, 1914: No member of the Staff of any hospital receiving patients in private rooms shall attend such private patient sent to the hospital by a member of the Society, not a member of the Staff, unless specifically requested to do so by the attending physician.

Please note that the figures in Sections 7 and 8 of this article, instead of being 7 and 8 should be 5 and 6.

DR. T. A. WILLIAMS, 1705 N St., N. W., a committee on collecting instruments for Belgian Physicians, will be glad to receive any instruments that members of the Society can spare, however old such instruments may be. Kindly send to Dr. Williams or notify him that you can contribute them.

GORGAS PRIZE MEDAL.—To be awarded yearly for the paper which shows the most important advances in medicine or surgery, on a medical or medico-military subject, preference being given to papers on medico-military subjects. Only for papers of exceptional value. Competition is open to medical officers of the Army, Medical Reserve Corps of the Army, and medical officers of the organized militia. The prize is given by the Association of the Medical Reserve Corps, U. S. Army, New York State Division. The Board of Award consists of three members of the Faculty of the Army Medical School appointed by the Surgeon General of the Army. The papers to be submitted by March 31st of each year, to the President of the Board of Award, Gorgas Prize Medal, Army Medical School, Washington. The award to be announced at the graduation exercises of the School May 31st.

FRATERNITAS MEDICORUM.—The Medical Brotherhood for the Furtherance of International Morality. (See *Science*, August 6, page 179.) Every physician may become a member; man or woman; no fee required, but in order to maintain the organization, distribute literature, &c., voluntary contributions are welcome. President, Dr. S. J. Meltzer, Rockefeller Institute,

New York City. The first Secretary is Dr. Wm. J. Gies, Columbia University, New York; Treasurer, Dr. Robert T. Morris, Post Graduate Medical School. There are a number of Councillors, all of them well known physicians. Also a large number of Honorary Presidents, of whom the following are Washingtonians: Surgeon General Gorgas; Dr. Alice Hamilton of the Federal Bureau of Labor Statistics. Also an Advisory Committee, including Dr. Alsberg of the Bureau of Chemistry, Dept. Agriculture, Dr. Anderson of the Hygienic Laboratory and Dr. Garrison of the Surgeon General's Library.

A committee of physicians and medical investigators request every physician to enroll as a member and declare his or her willingness to endorse and support the moral standard which the medical profession upholds when called on to perform its patriotic duties in an international strife. All communications should be addressed to Dr. Meltzer, 13 West 121st Street, New York City.

Post Mortem Examinations.—Examinations post mortem are often desired where, however, the facilities for making them are wanting. The funeral directors to some extent have provided such facilities at their establishments. Among the number the firm of Joseph Gawler's Sons has written to the Editor that it will afford the service to physicians, without charge either to the physician or family, and whether or not the firm is the funeral director. The necessary instruments are kept ready for use. In the absence of satisfactory arrangements otherwise, it is suggested that the offer of this firm be considered.

American Medical Directory, fifth edition, ready early in 1916. The Recognized "Blue Book" of the Medical Profession. A record of facts—ethical, accurate, complete.

This Directory lists information on: Medical License—The legal right to practice medicine—obtained directly from official records. Medical Graduation—The educational qualification—proven from alumni records. Society Membership—The indication of professional activities—from secretaries' records.

About 2,000 pp.; size 8 x 10½ inches, half leather and cloth, gold title; color, dark blue. Regular price, $10.00. Order now and save $2.00. Special pre-publication price, $8.00.

As two years have elapsed since the last edition of the Directory was issued, many changes have occurred. These are not only changes of addresses of those already listed in the book, but between eight and ten thousand new names will be added, these, of course, including recent graduates and those who have been licensed during the two years. Many changes of society affiliations have occurred, and these also will be included. In addition to the personal information regarding individual physicians, the book will contain practically all the data that a physician may

need pertaining to medical laws, hospitals, sanatoriums, medical societies, etc. The data given in the Directory concerning each physician equal—frequently exceed—that given in other directories and only to those who pay for the "write-up" or who subscribe to the book. By the use of symbols a large amount of information is given regarding each individual and yet in a very limited space. In fact, if the matter given were written out, the book would be three or four times its present size.

This Directory is an altruistic enterprise looking to the betterment of medical conditions in this country.

American Medical Association.—The Twelfth Annual Conference on Medical Education, Public Health and Legislation will be held at the Congress Hotel, Chicago, February 7 and 8, 1916, under the auspices of the Council on Medical Education and the Council on Health and Public Instruction of the American Medical Association. February 7th will be devoted to medical education, and February 8th to medical legislation and public health. All State licensing boards, State boards of health, State medical societies, associations of universities and other organizations interested are invited to send representatives to this conference. February 9th the Federation of State Medical Boards of the United States and the Association of American Medical Colleges will meet.

"Digest of the Case Law of the Regulation of the Practice of Medicine," compiled by the Medico-Legal Bureau and published by the American Medical Association. There was heavy initial cost of compiling this book, involving as it did the collecting, abstracting and digesting of all Supreme Court decisions on this subject. The subject is of much importance to the medical profession and especially to medical organizations. The standardization and regulation of the practice of medicine by the State is one of the most important questions in the medico-legal field and its proper solution is of the utmost importance and value to the medical profession.

Navy Department Bureau of Medicine and Surgery.—The next examination for appointment in the Medical Corps of the Navy will be held on or about February 23, 1916, at Washington, D. C., Boston, Mass., New York, N. Y., Philadelphia, Pa., Norfolk, Va., Charleston, S. C., Great Lakes (Chicago), Ill., Mare Island, Cal., and Puget Sound, Wash. Applicants must be citizens of the United States and must submit satisfactory evidence of preliminary education and medical education. The first stage of the examination is for appointment as Assistant Surgeon in the Medical Reserve Corps, and embraces the following subjects: (*a*) anatomy, (*b*) physiology, (*c*) materia medica and therapeutics, (*d*) general medicine, (*e*) general surgery, (*f*)

obstetrics. The successful candidate then attends the course of instruction at the Naval Medical School, which will begin on or about October 1, 1916. During this course he receives a salary of $2,000 per annum, with allowances for quarters, heat and light, and at the end of the course, if he successfully passes an examination in the subjects taught in the school, he is commissioned an Assistant Surgeon in the Navy to fill a vacancy. Full information with regard to the physical and professional examinations, with instructions how to submit formal application, may be obtained by addressing the Surgeon General of the Navy, Navy Department, Washington, D. C.

"Sterilization of Dental Instruments Important.—The possibility of the transmission of disease through the medium of dental instruments has probably been considered by every occupant of the dentist's chair. It constitutes one of the fears with which a patient is possessed the moment he adjusts himself for his period of treatment. Authoritative instances of the conveyance of contagion in this manner are extremely rare, its frequency not being determinable, although few will deny the possibilities of occurrences of this character.

"The list of organisms which may contaminate dental instruments is formidable, but this does not mean that the diseases of which they are the causative factors necessarily ensue if they are accidentally carried into the mouth. Their presence upon dental instruments is, however, an indication of what the surgeons call poor technique. In surgery, poor technique is usually attended with disastrous results, but in dentistry errors of this character may produce no ill effects. In spite of this relative freedom from danger, dentists are determined that their methods shall equal the highest standards.

"Cleanliness should be the primary consideration in all dental operations. The white coat of the operator represents more than comfort; it is the symbol of neatness. The dentist who works with unclean instruments, who provides soiled linen, or who places a common drinking glass before his patient, should be judged accordingly. Fortunately the members of the profession who do these things are criticized and suffer from loss of patronage, so that there is a strong tendency on the part of dentists to maintain their surroundings above reproach. With the sterilization of instruments some carelessness may manifest itself, partly owing to the fact that many instruments are injured by such processes, are too complicated to be treated in this manner, or that the public is not competent to detect errors of technique. However, the public is rapidly learning the value of aseptic methods and the proper equipment is now found in nearly all dental offices.

"Thorough studies of the sterilization process have recently

been made for dentists by the United States Public Health Service, at the request of various dental associations throughout the country, and in a recent publication of that Service detailed information will be found as to the accepted methods for the sterilization of all dental instruments."

THE REPORT OF THE SURGEON GENERAL OF THE UNITED STATES PUBLIC HEALTH SERVICE FOR 1914–15 records the largest amount of work performed in the history of that organization. Since the passage of the law of 1912 the public health functions of the Service have materially broadened, thereby greatly increasing its usefulness to the American people. Throughout the report the economic importance of disease prevention is made apparent to the reader.

Perhaps the most important achievement of the year was the discovery that pellagra is a deprivation disease, resulting from a faulty diet containing an excess of carbohydrates. While the final experiments which led to this discovery have only recently been completed, the conclusion itself is the culmination of investigations extending over a period of seven years. The work has consisted of epidemiological field studies, actual feeding experiments conducted at numerous places in Georgia and Mississippi, and experimental research at Spartanburg, S. C., and other places.

A new national quarantine station was opened at Galveston, Texas, and the control of the Boston station was transferred to the Public Health Service. A great reduction in immigration was observed during the year, with a corresponding increase in the number of aliens certified. At the port of New York the percentage rose from 2.29, previous to the development of the European conflict, to 5.37 since that time; this increase largely being due to the fact that with the decreased immigration more time could be devoted to the examination. The number of cases treated at marine hospitals and relief stations exceeded 55,000, 15,000 of which were hospital patients, a considerable increase over previous years. The Coast Guard Cutter "Androscoggin" was fitted out as a hospital ship and affords relief to deep sea fishermen on the banks of Newfoundland.

On the occurrence of the plague at New Orleans, the first outbreak upon the Gulf seaboard, the State and local health authorities requested the Public Health Service to take charge of the situation. Extensive rat-proofing and other anti-plague measures were undertaken, resulting in the eradication of the disease from among human beings, and the practical extermination of the rodent infection.

Great reduction in the incidence of malaria was obtained in localities where surveys were conducted. Drainage projects, rice culture studies and the conditions surrounding the impounding

of water for power purposes were investigated in order to eradicate as far as possible the disease in these areas. Scientific investigations of malarial infection showed that in the latitude of this country the most important agent in carrying the infection through the winter season is man, and not the infected, hibernating Anopheles mosquitoes, as was previously supposed. From the standpoint of prevention this is a discovery of considerable value.

Studies of occupational diseases and industrial hygiene were instituted at several places during the year. A survey of the industries of Cincinnati was made to determine the cause of the prevalence of tuberculosis among industrial workers. The investigation relating to the migration of persons suffering from tuberculosis was completed.

Upon the request of the health authorities of five States, the organization and operations of the respective boards of health were studied and recommendations advanced for improvement in the powers and duties of these bodies. The health organizations of several cities were likewise investigated.

Investigations of the pollution of streams and the examination of shellfish were also conducted.

Trachoma was combated in the Appalachian Mountains where it is most prevalent, over 12,000 cases being treated. Surveys in certain States during the year showed that the disease is not an uncommon infection.

Rural sanitation work was conducted in six different States and everywhere resulted in the reduction of typhoid and other communicable diseases.

Public health laboratories for the prevention of the interstate spread of disease were established at Chicago, Seattle and numerous other railway centers.

Additional duties have been imposed upon the Service by extension of relief benefits to the newly organized Coast Guard and the physical examination of seamen applying for the rating of "able seamen." For this reason, and because of the greatly increased health functions of the Service, an increase in the commissioned personnel was recommended. An additional building for the Hygienic Laboratory and the establishment of a National Leprosarium for the proper segregation and care of cases of leprosy were also recommended.

Bureau of the Census.—The Bureau reports that the death rate for the registration area of the United States for the year 1914 was 13.6, which is the lowest rate on record. The registration area comprises 25 States and includes about two-thirds (66.8 per cent.) of the entire population of the United States. The rate for Washington, D. C., was 16.6 (for white, 13.8; colored, 23.3); also the lowest recorded.

U. S. Public Health Service.—Examination of candidates for appointment as Assistant Surgeon, January 24, 1916, at No. 3 B Street, Southwest, Washington, D. C. For further information, address the Surgeon General, Public Health Service, Washington.

Report of the Surgeon General of the Navy for the year ending June 30, 1915.—The report states that during the year there were thirteen cases of typhoid fever, all of which recovered. The admission rate for tuberculosis was less than previously, but the mortality was a little greater. An increase of fifty per cent. in admissions for malarial diseases, due to the service in Mexican waters. There were 42 deaths from drowning.

Report of the Surgeon General, U. S. Army, for the year ending June 30, 1915.—The following interesting items are extracted from this report. There was the lowest admission rate on record; the lowest non-effective rate; only seven cases of typhoid fever, only two of which had had the complete course in vaccine. The admission rate for tuberculosis, the lowest on record in the army. Venereal disease less. Admission rate for alcoholism the lowest on record. The colored troops had the highest rate for non-effectiveness, for death and discharge. Admission rate for malarial diseases for Fort Washington, Md., reduced from 35.62 in 1913 to 14.71. For Washington Barracks it was 73.10; for Fort Myer, 28.49. There were seven cases of smallpox, 448 of measles, 5 of cerebro-spinal meningitis. Admission rate for venereal diseases, for white troops was 90.99; for colored troops 52.52. Alcoholism, white troops 13.82; colored troops 1.64; tuberculosis, white troops 2.67; colored troops 5.28.

REVIEW.

Laboratory Methods, with Special Reference to the Needs of the General Practitioner. By B. G. R. Williams and E. G. C. Williams, Third edition. St. Louis. C. V. Mosby Company, 1915. Pp. 214, Price, $2.50.

This treatise aims to be a practical description of useful laboratory methods that may be easily and inexpensively performed by the busy general practitioner, intermediate in character between a compend and an elaborate manual. The style is somewhat picturesque and sketchy, and while many of the descriptions of the tests are useful and practical, their brevity in many instances is scarcely conducive to the thorough grasp of technic and interpretation that is essential to more than a merely empirical familiarity with the subject. Typographical errors are not infrequent, such as "bleeding adenoids" (page 149) for "bleeding hemorrhoids." Some of the subjects presented, such as histologic

methods, the detection of poisons, and the analysis of water, would scarcely seem to belong to the class of common and simple methods, which the work is supposed to cover; and the space devoted to these might have been better utilized in other directions. Many important subjects are omitted or treated too cursorily to afford useful information. The technic of lumbar puncture, for instance, is described, but the method of counting the cells in the spinal fluid is not detailed, although this is one of the most important procedures connected with this fluid, and fully as simple a matter as counting blood cells. Directions for preparing culture media and important staining solutions are omitted, the physician being recommended to purchase these from dealers; the use of such ready-made materials is, however, apt to result in disappointment and failure. The authors, however, "realize that no book of this size can include all that is good in the medical laboratory, and recommend frequent reference to the larger texts"; but the owner of a larger manual might find little use for this abbreviated treatise.—J. B. NICHOLS.

RECENT PUBLICATIONS OF PHYSICIANS OF THE DISTRICT OF COLUMBIA.

J. F. Anderson, P. H. S.; Typhus fever in Mexico, in England and in this country; *Jour. A. M. A.*, Nov. 27, 1945.

J. F. Anderson and J. P. Leake, P. H. S.; Method of producing tetanus toxin; *Jour. Med. Res.*, November; abstracted in *Jour. A. M. A.*, Dec. 11, 2121.

N. P. Barnes; The sesamoids of the Flexor Brevis Hallucis; their importance; *N. Y. Med. Jour.*, Nov. 6; abstracted in *Amer. Jour. Surg.*, December, 463.

Rupert Blue, P. H. S.; Plague prevention measures, their development and present status; *Amer. Jour. Trop. Dis.*, November. Also, Sanitary preparedness; *South. Med. Jour.*, January 8.

J. G. B. Bulloch; In what manner shall we look upon disease; *Western Med. Times*, January, 328. Also, Medicines used in the treatment of diseases; same jour., December, 270.

H. R. Carter, P. H. S.; Notes anopheles production from a malarial survey; *Amer. Jour. Trop. Dis.*, June; abstracted in *South. Med. Jour.*, December, 1062.

C. N. Chipman; Edema of larynx during anesthesia, report of two cases requiring tracheotomy, with recovery of both; *Amer. Jour. Surg.*, Supplement, January 18.

E. D. Clark and M. E. Pennington; Refrigeration, transportation and conservation of poultry and fish products; *Jour. Sociol. Med.*, October.

W. M. Clark; Hydrogen electrode vessel; *Jour. Biol. Chem.*, December.

J. Constas; Results of salvarsan and mercury in 18 cases of primary syphilis; *Med. Record, N. Y.*, Nov. 27.

R. G. Davis, U. S. N.; A sporadic case of typhus fever; *U. S. Naval Med. Bull.*, January, 104.

A. M. Fauntleroy, U. S. N.; Military organization and equipment in the present war; *U. S. Naval Med. Bull.*, January, 34.

P. C. Fauntleroy, U. S. A.; Suggestions for a field emergency case; *Mil. Surg.*, February; abstracted in *South. Med. Jour.*, December, 1065.

W. D. Foster; Two new cases of polyradiate cestodes; *Jour. Parasit.*, September.

S. J. Franz, M. E. Schutz and A. A. Wilson; The possibility of recovery of motor function in long standing hemiplegia; *Jour. A. M. A.*, Dec. 18, 2150.

A. W. Freeman, P. H. S.; Good water for farm homes; Pub. Hlth. Bull., May; abstracted in *South. Med. Jour.*, December, 1062.

F. H. Garrison; John Shaw Billings; A memoir; reviewed in *California State Jour. Med.*, December, 488.

Joseph Goldberger, C. H. Waring and D. G. Willets, P. H. S.; The prevention of pellagra; Reprint 307 from Pub. Hlth. Reports, Oct. 22. Also, A test of diet in the prevention of pellagra; *South. Med. Jour.*, December, 1043.

W. C. Gorgas, U. S. A.; Tropical sanitation in its relation to general sanitation; *Jour. A. M. A.*, Dec. 25, 2207.

J. H. Harris, U. S. N.; Report of a case of psoriasis limited almost exclusively to the scalp; *U. S. Naval Med. Bull.*, January, 109.

H. H. Hazen; Skin cancer; *Jour. A. M. A.*, Sept. 4; abstracted in *Jour. Nat. Med. Assn.*, Oct.–Dec., 315. Also, Diseases of the skin; 539 pages, 233 illustrations; published by C. V. Mosby, St. Louis, Mo., 1915.

L. L. Hopgood, U. S. A.; An ambulance company; *Mil. Surg.*, February; abstracted in *South. Med. Jour.*, Dec., 1065.

L. W. Johnson, U. S. N.; A bronchiogenic; *U. S. Naval Med. Bull.*, January, 105.

E. F. King; A case of alkaptonuria; Trans. Amer. Urolog. Assn.; Reprint.

G. M. Kober; Tuberculosis; Report 309, Pub. Hlth. Reports, Oct. 29.

R. S. Lamb; Is migraine a forerunner of glaucoma? *Annals Ophthal.*, October.

M. W. Lyon, Jr.; An easily filled capsule for collecting blood; *Jour. A. M. A.*, Nov. 20, 1813.

J. F. Moran; The endowment of childhood, from the obstetric standpoint; *Jour. A. M. A.*, Dec. 25, 2224.

J. Nack; Study of psychoses associated with cerebral arteriosclerosis; *Med. Rec., N. Y.*, Dec. 11.

C. A. Pfender; The roentgen ray a factor in myositis ossificans circumscripta; WASH. MED. ANNALS, May; abstracted in *South. Med. Jour.*, January, 50.

T. W. Richards, U. S. N.; Studies pertaining to light on shipboard; *U. S. Naval Med. Bull.*, January 19.

C. W. Richardson; Indiscriminate tonsillectomies; *Index of Otolaryngol.*, September; abstracted in *Eclect. Med. Jour.*, December, 643.

J. D. Rogers; Appendicitis in women; *Va. Med. Semi-Mo.*, Dec. 10, 428.

W. C. Rucker, P. H. S.; The relation of rodent plague to human infection; *Jour. A. M. A.*, Nov. 20, 1767.

W. Salant and C. W. Mitchell; Influence of oil of chenopodium on intestinal contractility; *Amer. Jour. Physiol.*, November.

J. W. Schereschewsky, P. H. S.; Industrial hygiene; Reprint 302 from Pub. Hlth. Reports, Oct. 1.

J. W. Schereschewsky and L. H. Tuck, P. H. S.; The health of garment workers; The hygienic conditions of illumination in workshops of the women's garments industry; Pub. Hlth. Bull., No. 71, May.

R. Sheehan, U. S. N.; Classification of mental diseases; *U. S. Naval Med. Bull.*, January, 61.

J. F. Siler, U. S. A.; Barbados in British West Indies; Pellagra in Barbados; *Amer. Jour. Trop. Dis.*, October.

C. A. Simpson; The prevention of cerebro-spinal syphilis; *Va. Med. Semi-Mo.*, May 7; abstracted in *South. Med. Jour.*, December, 1064.

A. F. Stevenson, P. H. S.; An efficient liquid disinfectant; Reprint 304, Pub. Hlth. Reports, Oct. 8.

C. W. Stiles and Floyd Graves, P. H. S.; Lung capacity of children; Reprint 306 from Pub. Hlth. Reports, Oct. 15.

C. W. Stiles and G. A. Wheeler, P. H. S.; Heights and weights of children; Reprint 303, Pub. Hlth. Reports, Oct. 8.

C. W. Stiles and D. N. Richards, P. H. S.; Tobacco and snuff, their use by white school children in the city of X; Reprint 301 from Pub. Hlth. Reports, Oct. 1.

R. J. Terry and M. Wiener; Mydriatic action of dextrohyoscyamia; *Annals Ophthal.*, October.

E. Thompson, U. S. N.; A simple test of sterilizer efficiency; *U. S. Naval Med. Bull.*, January, 99.

C. H. T. Townsend; Identification of the stages in the asexual cycle of Bartonella bacilliformis, the pathological organism of Verruga, and their bearing on the etiology and unity of the disease; *Jour. Wash. Acad. Sci.*, Dec. 19, 662.

J. R. Verbrycke; Hereditary tendency to gastric ulcer; abstracted in *Jour. N. J. Med. Soc.*, December, 612.

B. S. Warren, P. H. S.; Sickness insurance a preventive of charity practice; *Jour. A. M. A.*, Dec. 11, 2056.

W. A. Wells; Vocal strain from a laryngologist's standpoint; its causes and prevention; *South. Med. Jour.*, December, 1077.

M. I. Wilbert, P. H. S.; The number and kind of drug addicts; *Pacific Med. Jour.*, January, 45. Also, Reprint 294, Pub. Hlth. Reports, August 6. Also, Cosmetics and drugs; Reprint from Pub. Hlth. Reports, Oct. 15.

D. G. Willets, P. H. S.; The treatment of pellagra by diet; *South. Med. Jour.*, December, 1044.

T. A. Williams; Misdiagnosed cases of compression of the spinal cord; Reprint. Also, Hypo-adrenia, miscalled neurasthenia; diagnosis and prognosis; *Arch. Diagnosis*, October. Also, The treatment of psychoneurotic patients; *Pacific Med. Jour.*, December, 745. Also, Antecedents of high blood pressure and nervousness; *West Va. Med. Jour.*, May; abstracted in *South. Med. Jour.*, December, 1041. Also, Origin of supernatural explanations; *Jour. Abnorm. Psych.*, October-November.

Prentiss Willson; Case of boric acid poisoning: WASH. MED. ANNALS, November; abstracted in *Jour. A. M. A.*, January 1, 63.

W. C. Woodward; Statistical study of respiratory diseases as a factor in the causation of infant mortality; *Jour. A. M. A.*, Jan. 1, 55.

W. D. Wrightson, U. S. A.; Sanitation of Vera Cruz, Mexico, during the American occupation; *South. Med. Jour.*, December, 1047. Also, Mosquito eradication and prevention, &c.; *Amer. Jour. Trop. Dis.*, June; abstracted in *South. Med. Jour.*, December, 1061.

PERSONAL NOTES.

Dr. Carl L. Alsberg attended the meeting of the American Association for Study and Prevention of Infant Mortality and read a paper on "To what extent may the mother substitute proprietary preparations for the advice of the physician."

Association of Southern Medical Women.—Drs. Mary Parsons and Mary L. Strobel attended the meeting at Dallas, Texas, Nov. 10, and were both elected Vice Presidents.

Council of Pharmacy and Chemistry, A. M. A.—Drs. C. L. Alsberg and M. I. Wilbert are members of the Council.

Dr. J. B. Gregg Custis, age 60, graduate 1878 of the Homeopathic Medical College, New York, died in this city Nov. 2, 1915, of hematemesis. He was at one time President of the American Institute of Homeopathy, and for many years was President of the Board of Medical Supervisors of this District.

Dr. L. De Saussure, P. H. S., has been transferred from the Hygienic Laboratory to the Marine Hospital, Baltimore.

Medical Society of Virginia.—Meeting at Richmond, Oct. 26 to

29, 1915. Drs. Harnsberger, La Garde, Roy and T. A. Williams attended.

Dr. Knox Emerson Miller, of this city, was married October 29, 1915, to Miss Noxie Bliss Miller, of Berksville, Ky.

National Association for the Study of Pellagra.—Meeting at Columbus, S. C., October 21 and 22. Drs. J. F. Siler, U. S. A., Joseph Goldberger, P. H. S., W. J. McNeal, Carl Voegtlin and D. G. Willets, P. H. S., attended and took part in the discussion. Dr. Willets read a paper on the "Treatment of pellagra by diet."

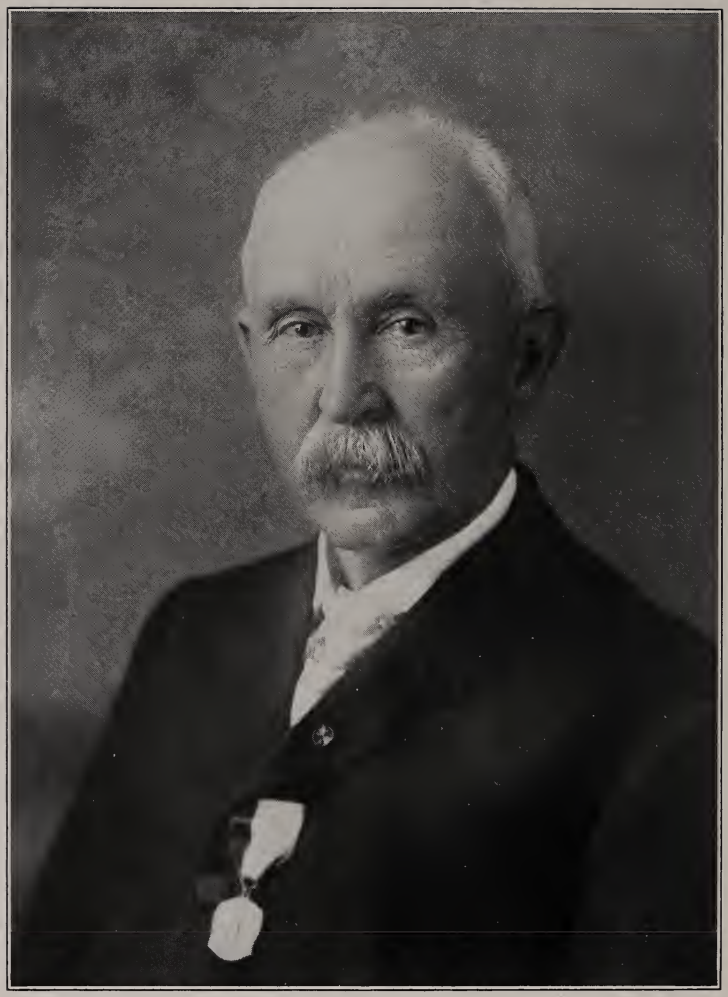
Dr. J. C. Perry, P. H. S., has been relieved from duty in this city and ordered to Ellis Island, N. Y. Harbor, for duty as chief medical officer.

Southern Medical Association.—Meeting at Dallas, Texas, Nov. 8 to 11. Dr. A. W. Freeman, P. H. S., read a paper on "The small town the neglected unit in sanitary administration." He also discussed the subject of pellagra.

Southern Surgical and Gynecological Association.—Meeting at Cincinnati, December 13 to 15. Drs. J. W. Bovée, W. P. Carr and Frank Hagner attended and took part in the discussions.

Dr. Edgar Thompson has been reëlected President of the North Capitol and Eckington Citizens Association.

Dr. F. C. Walsh, of San Antonio, Texas, also a member of this Society, has been elected President of the Bexar County Medical Society, Texas.



Geo. M. Sternberg

Vol. XV. MARCH, 1916. No. 2.

WASHINGTON MEDICAL ANNALS

THE STERNBERG MEMORIAL.

The following were the exercises at the joint meeting of the Medical Society of the District of Columbia and the Association for the Prevention of Tuberculosis of the District of Columbia, January 19, 1916, held in the lecture room of the George Washington Medical School.

The President of the Medical Society presided and opened the meeting, saying:

In behalf of the Medical Society of the District of Columbia I bid you welcome.

The Medical Society of the District of Columbia deems it a privilege to take part in a memorial meeting to the great soldier, the fervid philanthropist, the enthusiastic humanitarian, the illustrious physician.

General George M. Sternberg was an honorary member of the Medical Society of the District of Columbia and President of the Association for the Prevention of Tuberculosis of the District of Columbia.

After his retirement from the Army he spent the not the least momentous years of his life in efforts to reduce and to stay the ravages of tuberculosis.

He was among the workers and leaders in the crusade which resulted in reducing the death rate from tuberculosis in the United States in ten years from 200.7 per 100,000 in 1904 to 146.8 per 100,000 in 1914, the decline being steady from year to year, a reduction of more than 25 per cent.

But from others who are more conversant with the subject and who have greater felicity of expression you will hear of the life work of this great man.

Dr. G. M. Kober then read the following sketch, as a report of the Committee of the Medical Society:

George Miller Sternberg.

Surgeon-General Sternberg, retired, one of our honorary members, was born June 8, 1838, at Hartwick Seminary, Otsego County, New York. His father, the Reverend Levi Sternberg, a

Lutheran clergyman, and for many years principal of Hartwick Seminary, was a descendant of Nicholas Sternberg, one of the early German settlers (1703) from the Palatinate.* His mother, Margaret Levering (Miller) Sternberg, was the eldest daughter of Reverend George B. Miller, D. D., for many years professor of Theology in Hartwick Seminary.

George M. Sternberg was the oldest of a family of ten children and received his early education at Hartwick Seminary. At the age of sixteen he commenced teaching school at New Germantown, N. J., and became self-supporting. Having decided to study medicine, at the age of nineteen he entered the office of Dr. Horace Lathrop, at Cooperstown, N. Y., and subsequently attended the College of Physicians and Surgeons, New York, from which institution he graduated in the class of 1860, and commenced the practice of medicine in Elizabeth City, N. J.

Military History.—At the outbreak of the Civil War Dr. Sternberg passed the examination for the Medical Corps in a class of twenty-one, and was appointed Assistant Surgeon, U. S. Army, May 28, 1861. He was present at the first battle of Bull Run, and received official commendation from Brigadier General George Sykes for his services in the earlier battles of Gaines' Mill, Turkey Bridge and Malvern Hill, and also brevet commissions for faithful and meritorious services during the War. He also received the brevet commission of Lieutenant Colonel "for gallant service in performance of his professional duty under fire in action against Indians at Clearwater, Idaho, July 12, 1877."

It is a fact worthy of note that Dr. Sternberg has seen more active service on the battlefield and in Indian campaigns than any other medical officer with whose records we are familiar. Nor do the official records disclose the name of another medical officer who has faced as often and courageously the danger of cholera and yellow fever epidemics. During the cholera epidemic at Fort Harker, Kansas, in 1867, he lost a beloved wife, and by a strange coincidence he was also the Post Surgeon when yellow fever gained a foothold among the troops at Fort Columbus, New York Harbor, in 1871.

Having witnessed the devastating effects of these hydra-headed diseases, and realizing that medical science had not yet discovered the real cause of these scourges, it was perfectly natural that a man of Dr. Sternberg's sympathetic nature and truly scientific spirit should have determined to devote his life to the study of these mysteries.

As a result of his experience at Governor's Island he was ordered to the yellow-fever zone in 1872, and served at New

*A son of Nicholas Sternberg was a member of the "Committee of Safety" in Schoharie County, and several of his uncles and brothers were in the Army during the war of the American Revolution.

Orleans and Fort Barrancas, Florida, where his wife courageously accompanied him. At the latter post he passed through two epidemics of yellow fever in 1873 and 1875. During the latter epidemic he suffered himself a severe attack. His first publication of scientific value related to the clinical history of yellow fever as observed by him during these outbreaks. In 1876 he was ordered to the Pacific Coast, and in the following year he was engaged and distinguished himself in an active campaign against the Nez Perces Indians. It was the good fortune of a member of your committee to meet Dr. Sternberg for the first time in the fall of 1877, at Fort Walla Walla, and the impressions then created as to the studious habits and scientific and critical character of Dr. Sternberg's mind have never been effaced. In addition to his duties as Post Surgeon he was then mastering the French language and deeply interested in the germ theory of disease.

In 1878, while stationed at the same post, he began his experiments to determine the practical value of disinfectants, using putrefactive bacteria as the test of germicidal activity. These experiments were subsequently continued in Washington, D. C., and in the laboratories of the Johns Hopkins University, under the auspices of the American Public Health Association, as chairman of a committee appointed and given an appropriation for the purpose of making such investigations. The results of his investigations were published in full in the Transactions of the American Public Health Association in 1888, but they had won for him the "Lomb prize" as early as 1886. This prize essay, published in 1886, and brought up to date at the request of Mr. Lomb by Dr. Sternberg in 1899, has been translated into several foreign languages, and practical measures of disinfection in this country and abroad are largely based upon the results obtained in these investigations. It may be truly said that scientific disinfection had its inception with the labors of Koch and Sternberg.

No one, unless familiar with bacteriological work, can have the slightest conception of the magnitude of the painstaking labor involved in the determination of the "thermal death point" of pathogenic organisms and the germicidal value of certain chemical and physical agents. It meant daily and exacting application extending over a period of years, but it was glorious work in the battle against infectious diseases. The eradication of preventable diseases is the highest aim of scientific medicine today, and in this field Dr. Sternberg was one of the chief foundation builders.

Dr. Sternberg's labors were not limited to the special field, for in the interval we find him active in other research work. In 1880 he discovered the micrococcus, now recognized as the specific cause of croupous pneumonia, and demonstrated the fact that it is found as a saprophyte in the buccal secretions of the mouths of perfectly healthy individuals. Later (in 1885) he demon-

strated the fact that the micrococcus of sputum septicemia—his micrococcus Pasteuri—is identical with the capsulated micrococcus found in the rusty sputum of patients with croupous pneumonia. While it has fallen to the lot of Fraenkel to receive most of the credit of this important discovery, there can be no question that Dr. Sternberg first recognized and described the organism, although he did not associate it in his first publication with pneumonia, as he found it in his own and the buccal secretions of other healthy subjects. His work on sputum septicemia also for the first time explained the virulent character assumed in many instances by the bites of human beings.

In 1881, while stationed at Fort Mason, California, he demonstrated and photographed, probably for the first time in America, the tubercle bacillus, which had been discovered by Koch the same year.

In the same year he demonstrated that the so-called "bacillus malariae" of Klebs and Tomaso Crudeli was not an etiological factor in the production of malaria, which served to concentrate attention upon Laveran's plasmodium, discovered in 1880, and it was finally proved by the work of Manson and Ross that the mosquito was the intermediate host of the malarial parasite. It was also Dr. Sternberg's good fortune in 1885, upon his return from the International Sanitary Conference, in Rome, to demonstrate for the first time in this country the plasmodium of Laveran in freshly-drawn blood from a malarial patient. This demonstration was made in the pathological laboratory of the Johns Hopkins University and the ameboid movements of the plasmodium in the interior of the red blood corpuscles were plainly visible.

In 1886 he introduced the bacillus of typhoid fever to the medical profession in this country, in a paper read before the Association of American Physicians.

Dr. Sternberg's investigations with reference to the etiology of yellow fever date back to 1871, although his search for the specific organism commenced in Havana in 1879, while a member of the Havana Yellow Fever Commission, and was continued for about ten years. During this time he twice returned to Havana during the months of yellow fever prevalence, and visited Rio de Janeiro and Vera Cruz, also the town of Decatur, Alabama, during the epidemic of 1888. His report, published at the conclusion of these extended investigations, shows that all researches to that date had failed to demonstrate the specific cause of yellow fever. He showed that the generally accepted claims of Domingos Freire, of Brazil, to have discovered the germ of this disease—his "cryptococcus xanthogenicus"—and a method of producing immunity by inoculations, had no scientific foundation. He also showed that the bacillus of Gibier, and Carlos Finlay's "Micrococcus tetragenus febris flavae," and the various micro-organisms

encountered by himself and by other investigators bore no etiological relation to the disease. At the International Medical Congress, held at Berlin in August, 1890, Dr. Kober translated Dr. Sternberg's letter to Professor Hirsch, giving a synopsis of his work and stating that so far the specific organism of yellow fever had not been discovered. It certainly speaks well for his painstaking work that even now, when we know that the infectious agent is transmitted through the sting of a mosquito, and the search has narrowed down to the body of this insect, it has not been isolated and neither he nor others have found it, probably because it is ultra-microscopic.

Having exhausted the resources at his command in the search for the germ of yellow fever by microscopical examination of the blood and tissues, by culture methods and by experiments on the lower animals, he felt that the only method left which offered any promise of success was that of direct experiment on man. If the blood of a yellow-fever patient contained the specific infectious agent, this should be shown by inoculating a non-immune individual with such blood.

This line of research, we are informed, was pointed out by Surgeon-General Sternberg to Major Walter Reed, chairman of the Yellow Fever Commission in 1900, as was also the probability that it would ultimately be found that the disease is transmitted from man to man by an intermediate host.*

In justice to all concerned it should be remembered that when this commission was organized by General Sternberg the claim of the distinguished bacteriologist Sanarelli to have demonstrated the etiological relation of his "bacillus icteroides" was generally accepted, and had been upheld by two medical officers of the Public Health and Marine Hospital Service, sent to Cuba for the special purpose of investigating this claim. To General Sternberg it appeared impossible that a bacillus, which is easily demonstrated under the microscope, and which grows in ordinary culture media, could have escaped his observation during his extended researches if it were in fact the specific cause of yellow fever. The only possibility of such causal connection seemed to him to depend upon the identification of Sanarelli's bacillus as identical with a certain bacillus found by Sternberg in a limited number of cases during his researches in Havana. A comparison of cultures of the two micro-organisms made by Major

*The written instructions are for obvious reasons silent upon the subject of experimentation upon man. Dr. Aristides Agramonte, a member of the Commission, in the *Scientific Monthly* for December, 1915, publishes a letter from Major Reed dated May 25, 1900, from which we quote the following: "It will be our duty under verbal instructions from the Surgeon General to continue the investigation of the causation of yellow fever." Dr. Agramonte, in the same journal, writes "On the afternoon of June 25, 1900, the four officers met for the first time in their new capacity, on the veranda of the officers' quarters at Columbia Barracks Hospital. We were fully appreciative of the trust, and aware of the responsibility placed upon us, and with a feeling akin to reverence, heard the instructions which Major Reed brought from the Surgeon General."

Reed at the Army Medical Museum and also by Dr. Agramonte,* 1899–1900, showed that they were not identical, and General Sternberg, being satisfied that Sanarelli's bacillus was not concerned in the etiology of yellow fever, organized in 1900 the Yellow Fever Commission, with Major Reed as chairman. Major Reed's investigation resulted in the demonstration that in yellow fever the specific infectious agent is present in the blood of those suffering from the disease, and that the usual and probably only method of transmission of the disease is through the bites of mosquitoes of the genus Stegomyia. This brilliant demonstration by Reed and his colleagues has furnished the necessary basis for preventive measures which have been applied with entire success in the yellow fever zone, and the practical results are of incalculable value to mankind.

The members of your committee do not consider it unfair to the memory of Major Reed and his colleagues when they declare that much of the success achieved was rendered possible by the preliminary work of Dr. Sternberg, who had eliminated numerous errors committed by others, and had contested and overthrown the claims of several bacteriologists for the discovery of the specific organism. His conviction that all former claims were unfounded, or remained to be proven, is clearly evinced by the appointment of a commission which he personally selected.

It may be truly said that no history of this important discovery is complete without a just presentation of Sternberg's preliminary work. In giving due credit to all the participants of this splendid piece of research, it must be remembered that all of his work was of the highest scientific value, and his daily contact with the sick, his autopsies and bacteriological investigations in different countries and climes in search of the yellow-fever organism, involved at least the same risks and heroism displayed by members of the Yellow Fever Commission..

In support of the foregoing statement your committee submits the following testimony from Dr. Aristides Agramonte, the only surviving member of the Yellow Fever Commission, who, on January 3d, 1916, wrote to Dr. Kober as follows: "With regard to our own work I may say that General Sternberg's instructions to Major Reed were so precise yet so complete that they embraced even human experimentation, a thing until then considered well nigh impossible, and, without the moral support which his reputation as a scientist of the highest order and his official position

*Dr. Agramonte worked on this problem during the Santiago Campaign in 1898 and afterwards with Reed and Carroll in the bacteriological laboratory of the Army Medical Museum.

He was ordered to Havana in December, 1898, with instructions from General Sternberg and power to do all that might be necessary to clear up the problem. In 1899 Drs. Geddings and Wardin submitted a report affirming that Sanarelli's bacillus was present in almost all the cases, while Dr. Agramonte denied that it had such specific character, and showed its occurrence in cases not of yellow fever. He continued his researches until appointed a member of the Commission.

rendered us, I am sure we would never have undertaken the method of investigation with which you are familiar.

"I feel in my heart that in the greatest achievement of modern medicine the almost total extinction of yellow fever in our hemisphere, he took an important part that has not been generally recognized, in spite of your pointing it out in your speech (June 8, 1908). I say an important part and I would be tempted to say the most important part, since by the elimination of many confusing and erroneous ideas with reference to the cause of the disease, obtained by his indefatigable work in South and Central America, he cleared the way for us who came after him, laboring in the same field of investigation; he saved us the work, and thus the waste of effort and time which it would have entailed, by dealing with the fallacies in vogue during the last quarter of the Nineteenth Century, elucidating the question of yellow fever in a manner nearly complete."

In addition to this just and beautiful appreciation of Sternberg's work we present the testimony of the leading medical scientist in this country, Professor William H. Welch, of Johns Hopkins Medical School, who, in the Journal of the American Medical Association, April 16, 1910, page 1326, writes as follows:

"To the Editor:—In the all too generous appreciation of my work in the editorial in the Journal, April 9, it is intimated that my advice may have led to the creation of the Yellow Fever Commission. As all that relates to the history and work of this Commission is highly important, permit me to say that the credit for the creation of this Commission belongs solely to General Sternberg, who had previously so completely exhausted the purely bacteriologic study of yellow fever that it was possible for the Commission to follow the new direction which proved so fruitful in results."

We also refer to the following resolution which was adopted by the "Section on Public Health and Medical Science" on December 29, 1915.

"The Second Pan-American Congress, conscious of the irreparable loss suffered by the recent death of one of the most eminent workers in the field of Etiology and Preventive Medicine, a pioneer in bacteriological investigation in America,

"*Resolves* to express its profound condolence to the family of the late General George M. Sternberg, and to the Government of the United States, in whose army his counsel and his labors were so fruitful."

Dr. Sternberg was the pioneer in this country, not only in bacteriological investigations, but in the publication of bacteriological text-books. In 1880 he translated the work of Dr. Antoine Magnin from the French. In 1884 this work was greatly enlarged and brought up to date (480 pp., 8 vo., including 152 pp. from Magnin's work).

In 1892 Sternberg's "Manual of Bacteriology" was published (898 pp., royal 8 vo., illustrated by numerous photographs and cuts). In 1896 this work was revised and published under the title of a Text Book of Bacteriology.

Dr. Sternberg, since 1880, has been in the habit of illustrating his published works and scientific papers by photomicrographs made by himself. He has shown himself a master in this difficult art, and in 1884 published a volume on "Photomicrographs and How to Make Them" (204 pp., 8 vo.). Other published works of Sternberg are "Malaria and Malarial Diseases" (329 pp., 8 vo., Wm. Wood & Co., N. Y.); "Immunity, Protective Inoculation in Infectious Diseases and Serum Therapy" (325 pp., Wm. Wood & Co., N. Y., 1895); "Infection and Immunity," with special reference to the prevention of infectious diseases (203 pp., Putnam's Sons, 1903); making in all 2,592 pages, not to mention his chapters in text-books and medical encyclopedias, and over sixty other contributions to medical and scientific literature, many of which have been translated into foreign languages.

His last contribution to scientific literature was prepared by request in September, 1915, and deals with researches relating to the Etiology of Yellow Fever which culminated in the findings of the Reed Commission, and was presented at the Second Pan-American Scientific Congress.

In this paper he writes that "a single inoculation experiment on man had been made at his request in the city of Vera Cruz in 1887 by Doctor Daniel Ruiz, who was in charge of the civil hospital in that city. But this experiment was inconclusive for the reason that the patient from whom the blood was obtained was in the eighth day of the disease, and it is quite possible that the specific germ might have been present at an earlier period, and that after a certain number of days the natural resources of the body are sufficient to effect its destruction, or in some way to cause its disappearance from the circulation." General Sternberg writes, "I had not been able to make the experiment upon myself, as I was immune, having suffered a severe attack of yellow fever in 1875."

The concluding sentence reads as follows: "My excuse for writing this brief paper is to be found in the fact that the present generation of physicians had not appeared upon the stage when Professor Chaillè, Dr. John Guitèras and myself visited Havana in 1879 for the purpose of studying yellow fever, and probably few of the members of the profession have seen my published reports of subsequent investigations made by me."

Dr. Sternberg was appointed Surgeon-General, U. S. Army, May 28, 1893, and was retired for age June 8, 1902. During this period his official duties precluded the possibility of personal research work.

As Surgeon-General of the Army he established the Army

Medical School and encouraged medical officers to engage in scientific researches by establishing laboratories and furnishing necessary apparatus at all the larger post hospitals. He also provided all new hospitals with well-equipped operating rooms, and directed medical officers to operate for hernia, varicocele, etc., instead of discharging soldiers having disabilities curable by surgical procedures, to become life pensioners upon the Government. He established the Army Tuberculosis Hospital at Fort Bayard, New Mexico. On April 25, 1898, four days after the declaration of the Spanish-American War, he issued a circular calling attention to the danger from typhoid fever in the camps, the rôle of flies in the propagation of this disease, and the importance of camp sanitation. Had his note of warning been heeded, the disgraceful typhoid rates incident to unsanitary conditions of our military camps would not have been observed. He organized the "Typhoid Fever Board," with Major Walter Reed as chairman and Dr. Edward O. Shakespeare, of Philadelphia, and Dr. Victor C. Vaughan, of Michigan, as members. Upon his recommendation the last-named gentlemen were commissioned as surgeons of Volunteers in order that they might serve upon this board. He organized the Yellow Fever Commission of 1900, with Major Walter Reed as chairman and Drs. Carroll, Lazear and Agramonte as members.

During the Spanish-American War he established general hospitals at Key West, Fla., Savannah, Ga., Fort Thomas, Ky., Fort McPherson, Ga., Fort Monroe, Va., Fort Myer, Va., Washington Barracks, D. C., and San Francisco, Cal. Two hospital ships—the *Relief* and the *Missouri*—were purchased and equipped upon his recommendation. A fully-equipped hospital train was kept in service as long as required. All surgeons of volunteers and contract surgeons, with a few exceptions, were appointed upon his recommendation. He organized the female nurse corps and the corps of dental surgeons, in compliance with acts of Congress which had been passed in accordance with his recommendations. He recommended a large increase in the Medical Department to correspond with the increase in the Army in 1901.

General Sternberg's brilliant services to the nation have never been adequately rewarded, but Dr. Sternberg's unceasing study, honesty and truth have gained for him recognition in the educational and scientific world.

Membership and Honors in Medical and Scientific Societies.—Honorary member and ex-President of the American Public Health Association; member and ex-President of the American Medical Association; member and ex-President of the Association of Military Surgeons, U. S.; member and ex-President of the Philosophical Society of Washington; member and ex-President of the Biological Society of Washington; member and ex-President of the Cosmos Club of Washington; member and President

of "The President's Homes Commission" (1907); honorary member of the Association of American Physicians; honorary member of the Medical Society of the District of Columbia, and other local Medical Societies; honorary member of the Association of American Medical Colleges; fellow of the New York Academy of Medicine; President of section of military medicine and surgery of the Pan-American Medical Congress; late fellow, by courtesy, in Johns Hopkins University (1885–90); honorary member of the Epidemiological Society of London; honorary member of the Academy of Medicine of Rio de Janeiro; honorary member of the American Academy of Medicine; honorary member of the French Society of Hygiene.

The LL.D. degree was conferred upon General Sternberg in 1894 by the University of Michigan, and in 1897 by Brown University.

This sketch will not be complete without a brief reference to General Sternberg's service as a citizen of the National Capital. His activities were varied and his work unceasing, as shown by the following list:

President and founder of the Washington Sanitary Improvement Company; President and founder of the Washington Sanitary Housing Company; President of the President's Homes Commission; President of the Citizens' Relief Association; President of the Washington Sanatorium Company and Director of the Starmont Sanatorium; Chairman of Committee on the Prevention of Tuberculosis and President of the Association when organized as such; a member of the Committee on Organization of the International Tuberculosis Congress and the Congress on Hygiene and Demography; President, Board of Directors of Garfield Hospital; President, Board of Visitors of St. Elizabeth Hospital; Professor of Preventive Medicine in the Faculty of Graduate Studies of George Washington University.

Among the most beneficent of his activities may be mentioned the two housing companies of which he was one of the founders and the President from the date of organization until the time of his death. The object of these companies is the erection of sanitary homes at reasonable rentals. It must have been a pleasing reflection to him in his declining years to realize that he had played the leading part in providing clean, decent and healthful homes to over 808 families of moderate means. These deeds and the foundation of Starmont Sanatorium, together with the fruits secured by his leadership in the tuberculosis movement, always remain monuments to his useful and self-sacrificing career as a public-spirited citizen.

In this glorious service to humanity which claims the heart, mind and hand alike, and where, alas, ingratitude is often the only recompense, Dr. Sternberg had but two beacon lights to

guide him, his conscience and the example of the Great Physician. Hence, what a gratification to receive upon the evening of life evidence of approval of work well done. On June 8, 1908, a distinguished body representing the Army and Navy, the learned professions, statesmen, social workers and citizens of the city of Washington, tendered Dr. Sternberg a complimentary dinner in honor of his seventieth birthday, with appropriate addresses on his career. He passed away peacefully in the early morning of November 3, 1915, from the effects of chronic myocarditis, which he attributed to his attack of yellow fever in 1875, and on November 5 his remains were buried with military honors, and a large concourse of representative people of the National Capital paid their last tribute to a brave medical officer, a productive scientist, and a model citizen and philanthropist. Surely the world is better for having known him.

Signed:

Geo. M. Kober,
D. Olin Leech,
G. Wythe Cook,
Committee.

Dr. H. C. Macatee said: Mr. President, I wish to move the adoption of the report just made by Dr. Kober. I seek the honor of thus bringing into the records of the Society a memorial which recounts the achievements of such a life, and portrays the features of such a character; for thus the Society shall enrich its already-noble history, and thus it shall honor itself for having borne on its roll this distinguished man as an honorary member.

I am unwilling that the occasion should pass without adding my own brief word of appreciation of General Sternberg. I was associated with him in the work of the President's Homes Commission when, working with him and under his direction, I fell under the influence of his moving personality, and I still feel the stimulus that flows from that association with a man who at the time of my birth had already become a monumental figure in the then young science of bacteriology; who continued his fruitful labors until he was retired from the Army at the head of the Medical Corps, and enrolled among the scientific authorities of the world; but who, at a time when most men would have relaxed in the case of well-merited retirement, was still engaged in the constructive work of applied science for the good of humanity. While General Sternberg contributed very much to pure science, still it may be seen throughout the history of his life, as Dr. Kober has given it to us, that he was always seeking the practical application of science to the amelioration of human ills. His most widely known work in the field of bacteriology was that upon disinfectants and the practice of disinfection, his zeal being to

find the ways and means of protecting his fellows from bacterial disease. In his work in our own community he was not content with the scientific knowledge that insanitary housing conditions are so largely responsible for the prevalence of tuberculosis among the poor; nor was he appalled into inactivity by the thought that the poor we have always with us; he applied that scientific fact, in so far as he was able, by undertaking to provide sanitary houses for the poor through the housing companies which he organized. Nor was he content to view with an impersonal regret the practical outworking of the scientific sanatorium treatment of tuberculosis,—how proper treatment became available for the rich or for the pauper, but was beyond the reach of that great mass of people on the edge of poverty; he sought to do his part to correct this difficulty by the founding of Starmont Sanatorium. We are apt to feel that the needs of the world are so great and the numbers of its sufferers are so vast, that the benefits of the world's great scientific workers do not come within the reach of the common people who so sorely need them; but as I stood on the sidewalk and watched the passing of General Sternberg's coffin to the caisson on which it was borne to Arlington, there stood by me a lady, from that multitude on poverty's edge, who had been made well of tuberculosis at Starmont, and whose niece was at that moment recovering from the same disease, under the influences of an institution so largely made possible by General Sternberg. And then my mind went to another little family in my circle of patients which, although struggling with poverty, was enabled to live comfortably and to raise the children in sanitary surroundings in one of the homes provided by General Sternberg's labors. Here at least was one great scientific worker who, with his own hands, brought the boone of science to his fellow men.

The following resolutions were read by Dr. Leech and adopted:

In the death of Surgeon General George M. Sternberg, U. S. A., retired, the nation has lost a soldier-patriot, a scientific investigator, and a loyal citizen. General Sternberg served through the Civil War and in subsequent Indian campaigns. His researches as a bacteriologist in the field of preventive medicine brought him international renown and have proved of incalculable benefit to his fellows. His disproof of several suggested causes of yellow fever and his organization of the Yellow Fever Commission under Major Walter Reed, with broad instructions as to methods of procedure, paved the way for the important discoveries of that Commission. His service to his country during the Spanish-American War, his contributions to the literature of preventive medicine, his labors in the organization of housing companies in the District of Columbia, and his active leadership in the prevention of tuberculosis, entitle him to a high rank among America's useful citizens. Whether on the battlefield, in Indian

campaigns, or in the midst of cholera or yellow-fever epidemics, his bravery was equally apparent. General Sternberg was as modest as he was brave.

Resolved, That we, the colleagues of General Sternberg, as members of the Medical Society or the Association for the Prevention of Tuberculosis of the District of Columbia, assembled in Joint Memorial Session, testify to our high appreciation of the work and character of this devoted public servant.

Resolved, That we urge the Congress of the United States to express a Nation's gratitude for Surgeon General Sternberg's contributions to the public welfare by providing liberally for his widow; and be it further

Resolved, That a copy of these resolutions, with our deepest sympathy in her bereavement, be sent to Mrs. Sternberg, and copies thereof be forwarded to the appropriate committees of Congress.

Mr. Walter S. Ufford, Secretary of the District of Columbia Association for the Prevention of Tuberculosis, read the following letters:

Washington, D. C., *January* 18, 1916.

Dear Mr. Ufford:

I regret exceedingly that I cannot attend the Annual and Memorial Meeting of the Association tomorrow evening. The date, unfortunately, is the same as that of an annual meeting at Baltimore, Md., which I am virtually obliged to attend.

My sincere affection for General Sternberg and my appreciation of his true greatness convince me that too much honor cannot be done his memory. I believe if it was generally known how much the work of General Sternberg, whose modesty and sincerity more than equalled his remarkable efficiency, contributed to the fight against preventable disease and premature death, a monument in his honor would soon be erected by the Nation.

Very truly yours,
(Signed) E. C. Schroeder,
Superintendent of Experiment Station,
Bureau of Animal Industry, Bethesda, Md.

Washington, D. C., *January* 19, 1916.

Association for the Prevention of Tuberculosis:

Gentlemen:—I regret that, owing to an important engagement, it will be impossible to meet with the members at the joint memorial meeting, to be held at 8 o'clock this evening. Nothing would give me more pleasure than to contribute my humble share in doing honor to the memory of the late Surgeon General George M. Sternberg. I have known him for many years when we were together in the military service of our country. He was one of

the most earnest, devoted, untiring public officers that I have ever known. He brought his bright intellectual faculties and splendid education to the perfection of his profession and the development of that branch of science in which he was an active and conspicuous official. Such a life is full of useful and beneficent achievements. The world was better for his having lived in it. His death was a national loss, and I am much gratified that his associates and those who knew him best are taking measures to show their appreciation of his valuable services, his high character and the great good that he accomplished for the benefit of humanity.

Yours very truly,
(Signed) NELSON A. MILES,
Lieut. General, U. S. Army.

COLONEL JOHN VAN R. HOFF, Medical Corps, U. S. Army, retired, said: I had it not in mind to speak tonight, only to testify by my silent presence my respect and affection for him in whose memory we are gathered together here. But I cannot refrain from expressing my appreciation on behalf of the Corps of which General Sternberg and I have for so many years been members, of this splendid audience and Dr. Kober's admirable address, all testifying to the respect and regard in which our old chief was held in our profession and this community. I heartily thank you.

DR. S. S. ADAMS said that perhaps only those who had been closely associated with General Sternberg in the local organizations for the prevention of tuberculosis could realize fully the tremendous impetus and sustaining power contributed by his personality; he was undismayed alike by the magnitude of the task and by public indifference to the needs of the work. When it seemed to most of the directors of the Starmont Sanatorium that the institution must go under for lack of financial support, General Sternberg would steadfastly persevere and would exclaim: "The people will not let such an undertaking fail; they do not know its work and its needs; when they do know they will support it." And he made it his personal task to present those needs to the public, and time and again he had thus saved the day. He deserved the honor and gratitude of this community; and while Congress might well erect a monument to him for his services to the nation, this city could do no less than support the beneficent enterprizes he left to it as witnesses of his life in it.

MR. WILLIAM H. BALDWIN said: I had not intended to say anything on this occasion, but as I have listened to the remarks of others I have felt more and more that I ought to acknowledge my personal obligation to General Sternberg. During some of the time

since I made his acquaintance, soon after coming to Washington, we were thrown very close together, and I always found him true and helpful. He was, as General Miles has said, earnest, devoted and untiring. These qualities account for his remarkable achievements in a field which required patient attention to so many details, as well as the larger vision. I have been thinking that he was in some respects like an electric motor which, when the current is turned on, operates continuously at the same speed and with the same energy until it is turned off. We ought, however, to add another word, for he was also unselfish. This gave him greater power, for in all that he attempted the consideration of self was absent; so that he was enabled to go on working untiringly for others up to the very last, and his activity ceased only when the final call came. We should all be thankful for the inspiration of his life.

Rev. Dr. D. E. Wiseman said: Mr. President, as a member of the Tuberculosis Association, I am glad to be present upon this occasion, to do honor to a great man. I speak as the only man present, going back many years ago, when Mr. Chas. F. Weller, a former Secretary of the Associated Charities, seeing the great death rate from consumption in the District of Columbia, especially among the colored people, said: "Men, go and see what you can do as social workers to help cut down the ravages of this dread white plague." It was then that we found in General Geo. M. Sternberg, U. S. A., Dr. Wm. C. Woodward, Health Officer of the District of Columbia, and Dr. Geo. M. Kober, a store of knowledge and information which they readily imparted to us, and which formed the basis of the first Tuberculosis Committee of the Associated Charities of this District.

General Sternberg always impressed me as being a man, a broad man, a gentleman, a man who labored for the good of humanity, a philanthropist. Mr. President, when the Children of Israel were carried away captive to Babylon, as they sat upon the river banks and considered certain things, they exclaimed: "If I forget thee, O Jerusalem, let my right hand forget her cunning, and let my tongue cleave to the roof of my mouth." And so it seems to me if I were to sit here, knowing the good that has come to my people, through and by the efforts of this good and great man, I, too, would desire my tongue to cleave to the roof of my mouth if I did not say a word in praise of him. I close by saying: May his ashes rest in peace.

CASES OF ULCERATION AND PERFORATION OF THE STOMACH.*

By D. S. Lamb, A. M., M. D., LL.D.,

Washington, D. C.

Case 1.—Oval *tubercular ulcer* of greater curvature, about 2.5 inches from the pylorus; the ulcer half an inch in diameter; edges thickened and undermined; floor formed by the muscular coat. There were a few follicular ulcers in the duodenum. From a colored woman, age 23, who had had a cough for two months, with dulness over both lungs, and hemoptysis. The necroscopy showed much emaciation; an oval tubercular tumor size of pigeon egg in right cerebellar hemisphere; lungs generally adherent and studded with tubercles; peritoneum generally adherent and studded with tubercles; greater omentum contracted into a band and filled with tubercles; mesentery also contracted into a solid lump, its lymphatic nodes tubercular; liver contained a few large, cheesy tubercles; spleen filled with miliary tubercles; tubercular ulcers in ileum and caecum; tubercles in cortex of each kidney.

The specimen is interesting from its rarity; but few cases of tubercular ulcer of stomach have been recorded. The condition is secondary to tubercular foci elsewhere. The ulcers are usually small and single. It is still a question whether the infrequency is due to the destructive action of the gastric secretion on the bacilli, or simply a local resistance to the disease. Patients with pulmonary tuberculosis in the ulcerative stage, of necessity swallow bacilli in great numbers, especially when at meals.

The specimen is the only one of the kind in the Army Medical Museum; it was obtained at the Freedmen's Hospital, Washington, in 1865, by Dr. S. S. Bond.

Case 2.—*Round ulcer* one inch in diameter on posterior wall, penetrating nearly to peritoneum; nearly healed. There were several small, shallow ulcers on the anterior wall. From a white woman, age about 60, who died from strangulation of ileum through a congenital opening in the mesentery. She was under the care of Dr. H. D. Fry, of Washington, who stated that she had complained of pain in the region of the stomach. The specimen is shown because of the beauty of the healed ulcer.

Case 3.—*Post mortem perforation* of stomach, about half way between cardia and pylorus; opening 2.5 inches in diameter, in greater curvature; edges of opening and wall of stomach, for a radius of two inches, slimy, translucent, grayish-white in color, softened and friable; bloodvessels showed as dark arborescent lines. The large size of the opening may have been partly due

* Reported with specimens to the Medical Society February 2, 1916.

to handling. There was about one ounce of liquid, resembling milk punch, in the abdominal cavity. From a soldier, age 26, who had served in the navy for three years. About two weeks after enlistment in the army he was admitted to hospital with typhoid fever and died nine days afterward. The necroscopy showed enlarged solitary follicles and Peyer's patches; in the latter there was incipient ulceration. The specimen was contributed to the museum in 1886 by Dr. H. R. Tilton, Surgeon, U. S. Army.

The Museum also has a specimen, contributed by Dr. J. R. Wellington, of Washington, from an infant five months old, that died of diphtheria of the mouth and fauces. The stomach fundus contained a mass of coagulated milk and the mucosa was eroded in patches with patches of dark grey staining.

In both these cases the condition was, of course, not actually pathological; simply the result of the action of an excess of gastric secretion or the acids of decomposition, or both, on the mucosa. Most of these cases occur in young children in whose stomachs is found a large quantity of milk. The condition may, however, occur during life, from the same causes, if the resistance of the stomach is sufficiently reduced.

DIAGNOSIS OF A CASE OF TREMOR.*

By Tom A. Williams, M. D., C. M. (Edin.),

Washington, D. C.

A man of 46 was referred to me by Dr. W. P. Carr on February 3d on account of a shaking of the left arm since four years, and the right hand since November. There are times, especially when alone, when he can control the shaking. When under stress, the eyelids also twitch, and when eating, quivering of the abdomen occurs, and he has a sensation of twisting of intestines, when he lies down. He is worst in the morning. Upon exertion, a severe pain occurs in the right chest and arm since September; it is somewhat relieved when he stands.

The previous history is insignificant except where it concerns a pain in the back and "sciatica" after lifting a weight, eighteen years ago, which ceased about three years ago. He is better when starving. He gave out an odor that I have frequently noted in Parkinson's disease. His teeth had been well attended to.

Examination showed hyperactive reflexes, clonus of the left wrist when held in semi-extension; clonus of the left thumb when held in semi-adduction; tremor clonus of fingers at times when held in semi-extension; pronation clonus at times when the

* Presented with patient to the Medical Society February 2, 1916.

flexi-extensor clonus diminishes. The left pectorals are rigid, the neck stiffened, the shoulder muscles are semi-rigid, the left arm and wrist show characteristic cog-wheel resistance, but there is none elsewhere. A monotonous and deliberate speech he says is the result of his success in curing a stammering which lasted for years. The expression of the face is rather blank. Blood pressure was 136 and 88.

The scanning speech, twittering of the eyes, and tremor, gave rise to a suspicion of multiple sclerosis on the part of some who saw him. This opinion could be rejected at once; for the tremor was not intentional, almost ceasing during movement; the eye movements were not nystagmoid, and the speech was not characteristic at all.

The intensity of the tremulousness, its variability, the extraordinary contortion of the eyes and face, the intensity of the effort required to speak when he first entered the room, gave the impression that one might be dealing with a neurotic; but this interpretation was negatived by the blank expression, the regular clonus, and above all by the cog-wheel resistance of the left arm and wrist, and the board-like hardness of the pectoral and cervical muscles.

The diagnosis of paralysis agitans was further confirmed by the complete disappearance of the tremor and rigidity when one one-hundredth of a grain of hyoscine was injected hypodermically.

The patient continues to take hyoscine and is considerably relieved.

EXPERIENCES IN SERBIA.*

By Louise Tayler-Jones, M. S., M. D.,

Washington, D. C.

The object of my three months' trip to Serbia was to establish a Children's Hospital in such a place in that country as seemed best, under the conditions, to organize it. You may wonder that a children's hospital and welfare work should be started in a warring country when all efforts seemed to be needed for wounded soldiers. That would appear to be true, but let me bring to your mind the picture everywhere in Serbian towns last spring. There were numerous hospitals, for all prisons, schools, barracks, *et cetera*, were utilized as such, and the hospitals were more than full—indeed, each one often contained four or five times the number of patients supposed to represent its capacity. And they were very ill, for they had that terrible scourge, typhus, and they were dying—dying by the hundreds and the thousands—

* Read before the Medical Society November 10, 1915.

until, it was estimated, about 150,000 deaths occurred in Serbia from typhus alone during the short space of four months. If you looked through these hospitals and down the long lines of beds—some beds without mattresses and some mattresses without sheets, and some patients on the floor without either, and all with too few attendants and little care—you would fail to see the face of a woman or a child. They were mostly soldiers whom the authorities were trying to make well in order that they might fight for their country. And so the women and children, who, too, were ill of typhus and dying, were uncared for in their homes or in such places as they could find to rest.

Thus it seemed to Madame Slavko Grouitch that something must be done for the women and children of Serbia. Madame Grouitch is an American by birth, and the wife of the under secretary of foreign affairs in Serbia. She raised large sums of money in America and England, and placed certain sums with the American Red Cross, to be used for providing physicians, nurses and supplies for a baby hospital. Just here I might say that the prestige of the American Red Cross uniform—at least in Serbia—was noticeable and gave one advantages over one's fellow countryman who was doing relief work and yet not connected with that organization.

I agreed to go to Serbia, only six days before starting on the trip, as medical director, to establish the Mabel Grouitch Baby Hospital and such welfare work as could be begun in that time. Besides leaving my work here in shape I had to make out lists of everything needed for all parts of a baby hospital, including nursery, beds, diet kitchen and drugs, and also aid in making many of the purchases. If anything was left out it would have to be gone without, for we knew that we could not obtain it where we were going.

There sailed with me on July 19th on a Greek ship Dr. Katherine Travis, a graduate of McGill University, and a classmate of mine in medicine at the Johns Hopkins. She was assistant and was to become medical director when I left. The nurses were to sail two weeks later, and, on the ship with them, the supplies for the hospital. On the trip over to Athens nearly everyone tried to dampen our ardor. But, granting us health, we intended to look upon every part of the experience from the most optimistic standpoint. We had a taste of some trials before reaching our destination. On the small Greek steamship from Pyraeus to Saloniki, for hygienic reasons, we did not sleep in our cabins, but on deck, and did not eat in the dining room after the first meal. All this was forgotten, however, in our early morning approach to Saloniki—that wonderful view of a wonderful town sloping up the hillside from the water, and the hundred or more white minarets projecting upward like spears from all over the well-defined and ancient-walled city. And it was again forgotten

in the view from our hotel window out over the water, straight across to snow-capped Mount Olympus.

The trip from Saloniki to Nish requires twenty-four hours in these war times. Our first stop, after passing out of Grecian Macedonia into Serbia, was Ghevgheli. The tobacco factory, which had served as an American Red Cross hospital, loomed severe and uninviting, and was associated in my mind as the place where one of our own members, Dr. E. P. Magruder, acquired the infection which ended his life within a few days. And, journeying on in that train, over that railroad bed, I felt that his trip from Ghevgheli to Belgrade—from southernmost Serbia to the northern boundary—sickening as he was, must have been unspeakably wretched.

Nish, a year ago, at the beginning of the war, was a place of 20,000 inhabitants. With refugees coming south from the region of Belgrade and the arrival of officials and diplomats, it suddenly developed a population of 70,000. This does not mean that new buildings were put up, but it does mean that families were crowded into single rooms, and that the officials, who had beautiful homes in Belgrade, lived in one or two rooms. We arrived at Nish about six o'clock on the morning of August 10th. Since then I have become quite attached to the town, but that morning it presented a most forlorn aspect. The telegrams announcing our arrival had been delayed and no one met us. The carriages, such as they were, had been taken ; but we found an ox cart for our luggage. I smile now to recall how we lagged along after the oxen, because one of the doctors—there were four of us—absent-mindedly told the boy not to go too fast. Our breakfast at the Hotel Czar Russ gave us a feverish desire to find those who could assign us to living quarters, for after seeing the dining room, we desired no further acquaintance with this hotel if we could avoid it. We hunted up the American consul, and found there Dr. Richard P. Strong, Director of the American Sanitary Commission, who invited Dr. Travis and me to go to his quarters, the best in Nish. The others of the party were put up at the Second Reserve Hospital.

Among other things that we had learned, both on and before our arrival, was that supplies on reaching Saloniki were very much delayed in transit through the Balkans. One can easily see that this might be true, since that single-track road supplies not only Greece and Serbia, but Bulgaria, Roumania and Russia. Realizing that I might not see the supplies during the seven weeks that I planned to remain in Serbia, I at once decided to start a dispensary for children. The Serbian Government provided a site—a hill with a beautiful view over the town, with the Nishava River flowing through the valley, and the mountains rising around. Dr. Strong provided us with three large hospital tents, and Dr. Soubotitch of the Serbian Red Cross let us go

through his warerooms and pick out what we needed for supplies.

Our first week was a very happy one in carrying out this program and getting acquainted with the customs and the people. Adjusting oneself to the food problem was difficult. They were well supplied with eggs, all kinds of fowl, plums, melons and grapes. But the bread was heavy and coarse, sodden and sand-laden; there was no butter, nor did we get any bacon in that "Land of the Swine." We did not have cream and practically no milk. Indeed, there was so much that was lacking and difficult for our pampered American home-life taste. We gradually adopted the custom of finishing our breakfast with a cup of hot water and a piece of their heavy bread in order to have sufficient to last one until lunch time. After lunch and dinner we acquired the habit of eating either Turkish delight or sweet chocolate; not because we wanted it, but for its caloric value. Between the sweets and invitations to the Diplomatic Club we were able to maintain a reasonable weight. The Diplomatic Club, I may say, was created only with a view to providing food for its members. One of its waiters was an Austrian prisoner who had been head waiter at the Ritz Carlton, and the chef had been a cook at the Bellevue Stratford.

In regard to the language I will say that in the hospital we used interpreters. In most of the shops we could use German, but the diplomats and high officials all preferred French. The Serbian language is musical and very agreeable to the ear, probably more so than any other Slav language. It is not difficult to pronounce when one once learns the pronunciation of each letter. We had to learn many words and phrases and use them with those who could not speak anything but Serbian. Of the people themselves, the men are very tall, very good looking and fine specimens. I was especially impressed with their well-shaped noses. The women were somewhat good looking, but I did not see one who was tall. It does not seem possible that the specimens of children we saw could possibly grow up into such strong men and women, but I presume, provided they survive, they will. Unlike our first week, our second week became rather tragic through the severe illness of Dr. Travis. Like all Americans out there, who pick up something sooner or later, she developed acute malignant malarial fever, with a rather typical typhoid temperature chart.

On the tenth day after our arrival, with the assistance of Mlle. Gerasemovitch, M. Grouitch's niece, I opened the dispensary. We had five patients the first day. We also had a visit from the Bishop of Nish, who spoke in German, and told me, among other things, that the Children's Crusade passed through Nish. There were 12,000 of them when they arrived in Nish, but an epidemic broke out, taking the lives of about 4,000. From what he said,

the disease was evidently not typhus. It was probably bubonic plague or cholera. I believe history tells us that no one of these children ever reached Jerusalem.

Within a week we were seeing about twenty babies and children a day. In two weeks, about forty, half of them new cases. And in the first five weeks of the dispensary, we treated about 350 new cases. Sometimes a mother would walk twenty miles with a baby suspended on her back; and, on one occasion, a mother, who arrived after twelve o'clock, told us that she had been walking, carrying her child, since midnight. Among the different conditions met with there was much starvation. Occasionally a mother would be nursing a child two or three years of age because she had no other food. She herself could eat their coarse bread, but the child could not digest it. Occasionally we would find from the country a peasant family that could get cow's milk, but this was rare. More often we had to supply cans of condensed milk. We saw all kinds of skin diseases. Malaria was very common even among the babies, and I saw more tuberculosis of children in those five weeks than I see in five years in this country. Much of it was of the bone and gland types. A child who had hair long enough for anything to cling to had it clinging. Lice were very prevalent.

I have always appreciated the work of nurses, but I don't believe I was ever more glad to have their assistance than on that Wednesday, two weeks after our arrival in Nish, when our two American nurses appeared. One was assigned to dispensary work which was already becoming heavy and the other gave her time to Dr. Travis' recovery. Also, Dr. Boddy, of New York, who went over for the Serbian Government, gave me valuable aid in the clinics.

About a week later Madame Grouitch arrived. Through her efforts an excellent building was obtained for a hospital and the supplies were hurried through from Saloniki. The American Sanitary Commission helped to get our building in shape, and the fifteen Austrian prisoners, who had been given into our care, assisted in the work; but the war spirit, which was always present, became more accentuated in the mobilizing of the Bulgarian troops on the east and the Germans and Austrians on the north. Past our hospital was the railroad to the town of Pirot and the Bulgarian border, and soon train after train of box cars, filled with soldiers and cannon, was going to the front. As we arranged the little beds in place we could hear this continual grinding out over the railroad, and knew that in a week or so the Baby Hospital would be at an end, and in its place would be a Military Hospital filled with wounded and dying.*

The trip home, though hardly more interesting, was certainly

* In three weeks the personnel of the hospital and two other doctors had gone to the front to a field hospital.

more exciting than the stay in Serbia. Three days before leaving Nish there were no railroad facilities for going out of the country and it seemed as though an automobile would have to be requisitioned. Then the way became clear to Saloniki, the opposite direction to that which I had planned to take. I did not go to any of the countries through which I had planned to go, nor from the port from which my sailing had been engaged ; but did go through nearly all the countries that were left possible to pass through. We always went in a general direction towards home, hoping to find some further means of going on in our journey. At Saloniki we sailed, September 30, for Naples, on an Italian vessel. A sister ship had been torpedoed the week before in the Aegean Sea and another sister ship, lying in the harbor as we passed out and sailing the next week, never returned to that port. We never reached Naples in our ship, but went to Palermo, of which we had not heard as part of our itinerary. The beautiful Sunday morning we passed around the south of Greece three vessels were sunk in that region. Our trip from Palermo to Naples was by means of an Italian troop ship. Our trip from Naples home we had judged would be ten days, and straight for New York, but we went to all the interesting ports between those points and finally landed in Boston. On my arrival on these shores, less than three weeks ago, I was tremendously impressed with the remarkable appearance of prosperity ; with the structure of Commonwealth Dock ; with the wide streets and fine buildings ; with the well-dressed women and well-groomed men, and, above the good dressing and the good grooming, the wonderfully well-fed looking people ! I felt that we were a very spoiled lot ! It seemed a much longer way from America to Serbia than the actual miles, but I hoped that they would be able to get more of our abundance than we have ever thus far been able to give them.

As for the hospital and welfare work, I believe that, when war times are over, efforts will again be made to do something for the women and children of Serbia.

CASE OF SUBSIDENCE THROUGH RADIOTHERAPY OF A NEOPLASM IN THE REGION OF THE HYPOPHYSIS CEREBRI.*

By Tom A. Williams, M. D., C. M. (Edin.),
Washington, D. C.

A woman had severe central headache for sometime, temporary diplopia with dizziness and general misery with "awful feelings."

Examination showed spasticity, exaggerated reflexes, much restricted and interlaced visual fields, and increased sugar tolerance. X-ray pictures showed much absorption of the sella turcica.

* Presented with patient to the Medical Society January 5, 1916.

The *diagnosis* was: New growth in the pituitary region pressing upon the optic tract, hypophysis cerebri, peduncles, and uncinate gyri, as well as upon the vascular structures in that neighborhood. As an alternative to excision, Roentgenization was offered and accepted by the patient. As a result of numerous exposures, we found eighteen months after my first examination; cessation of headache for a year, expansion of the visual fields for over a year, then return to normal for several months, diminution of the spasticity, disappearance of the uncinate feelings.

Dr. W. T. Davis demonstrated slides to show changes in the visual fields of the patient under discussion.

Dr. T. A. Groover said that he had made many skiagrams of the patient's head, extending over a long period, in order if possible to demonstrate a normal *sella turcica;* he had never been able to do so. He exhibited plates showing the intracranial condition of the patient.

Dr. Roy said that it seemed to him that the radiologist and the ophthalmologist made the diagnosis in this case, if a correct diagnosis was really made. It did not seem to him that the symptoms as given would have revealed the presence of pituitary disease from neurological investigation alone; therefore, he was unable to understand Dr. Williams' insistance upon the extreme importance of the neurological examination.

Dr. Dufour said that, speaking from the standpoint of an ophthalmologist, there is a group of symptoms which are generally regarded as pathognomonic of a tumor of the pituitary body; they are (1) Disturbances of form and color, in the upper and outer quadrants; (2) Optic atrophy; (3) Motor-oculi disturbances; (4) Uncinate symptoms, which are temporary attacks of unconsciousness, lasting only a few seconds, and disturbance of taste and smell. If there is loss of secretion in the young there is lack of growth and fatty deposits over the body; if an increase of secretion, giantism results. Dr. Williams' case appears to be one in which there was some pressure exerted upon the pituitary body and uncinate gyrus, which was in some manner relieved. It might have been a cyst which eventually ruptured, thereby relieving the pressure. The fact that the patient recovered caused Dr. Dufour to doubt that it was a tumor of the pituitary body.

Dr. Selby was indebted to his colleagues for the presentation of this remarkable case. He refrained from commenting on the clinical diagnosis of Dr. Williams, but stated that the x-ray plates in this case failed to show any of the characteristic bony changes necessary to justify an x-ray diagnosis of pituitary tumor. Dr. Selby felt it timely to make an appeal for exactness of expression in discussing x-ray dosage. He felt that spectacular terms

as "*massive dose*," "*enormous radiation*" and "*therapeutic limit*" should give place to a statement of the number of special standard dose units delivered, the kind and thickness of the filters used, whether the fractional or single-dose method was employed, and at what intervals they were repeated. Such accuracy would permit a comparison of results to mutual benefit.

Dr. R. S. Lamb wished to say a word about the ophthalmological features of the case. The reversal of the color fields strongly suggested hysteria as an explanation of the symptoms. There was no hemianopsia, which we would expect in pituitary tumor; nor was the retinal picture indicative of tumor of that region. Both fields and ophthalmoscopic findings strongly suggested sphenoidal sinusitis. Indeed there were a number of symptoms which had not been mentioned, and in spite of the plea for minute neurological examination of such cases, no mention had been made of a long list of ocular signs, which might have been looked for and which might have a bearing on the diagnosis.

Dr. R. A. Hooe said that in discussing the case Dr. Williams had not mentioned tuberculosis as possible explanation of the pituitary lesion; if the gland should be the seat of that disease would the x-rays exert a curative influence?

Dr. Reede said that the high sugar tolerance suggested posterior lobe deficiency. Was any systematic note made of the pulse, temperature or other indications of metabolic activity; if so, were there any indications of a slowing of the heat-making mechanism? There are a number of new tests of the efficiency of the thermic regulatory apparatus which it would have been interesting to apply in the case.

Dr. Groover said that in the treatment of the case he had given 12 Holzknecht units, through 4 mm. of aluminum, at 6 weeks intervals. The mere fact that the woman got well inclined him to doubt the accuracy of the diagnosis.

Dr. W. T. Davis said as to the absence of hemianopsia, that this case came under observation early, before that degree of pressure had developed which is necessary to cause the complete picture of pituitary tumor that we would expect. There was a mild optic neuritis; there were very small hemorrhages limited to the disc; there was marked asthenopia. No other lesions were observed. The slow and steady improvement under x-ray treatment was the best indication of the efficacy of that treatment.

Dr. Williams had not brought the case before the Society for criticism; for that, he had shown it to his neurological colleagues in Philadelphia; he had brought it to demonstrate a rare and instructive condition. The remarks made about the visual symptoms showed a complete ignorance on the part of the speakers of the important recent papers on this subject. Only 25 per cent. of cases show bitemporal hemianopsia; most show as did this

patient. He had himself described, with Wilmer, an uncinate syndrome, and the case was published in the ANNALS in 1911; Dr. Williams is not, therefore, unfamiliar with this condition. The present case did not show a complete uncinate syndrome; it was diagnosed and treated too early for the complete picture to appear; there was present, however, a sketch of the uncinate syndrome. Hysteria does not cause inversion of the visual fields; Babinski showed that ten years ago. There was no test made of the thermic reactions for a number of reasons; these tests are very new and opportunities were lacking to apply them. There was no low pulse rate and no sign of hypopituitarism, but the high glucose tolerance. As to the recovery casting doubt on the diagnosis, that need not follow; it only leads to the idea that the growth is an adenoma of embryonic type, amenable to x-ray treatment.

THE RESPONSIBILITY OF THE PHYSICIAN WITH RESPECT TO THE INSANE PATIENT.*

By FREDERICK A. FENNING, LL.M.,

Of the Bar of the District of Columbia.

The responsibility of the physician with respect to the insane patient is three-fold—legal, professional and moral. In this classification I have included, and will place some emphasis upon, the moral responsibility, in order to consider thereunder the general medico-social responsibility which the physician bears in his relation to third persons, and this means, in the present instance, the general public.

With respect to the insane patient, the legal responsibility of the physician begins when he is called to see a borderland case or when he observes in one of his patients the early signs of mental disorder. Chronologically, this responsibility continues to the time immediately preceding the patient's death, when the physician may be called upon for an opinion as to testamentary capacity—and even beyond death, when he may be required to testify as to the condition of mind at a given time.

One of the first questions arising, and it is of tremendous importance, is whether the patient should be deprived of his liberty. This question presents itself squarely when the physician has to decide whether or not he will give a required certificate as to mental incapacity, as a basis for proceedings for commitment. The manner of commitment varies in the different jurisdictions, running from the humane methods of New York, Massachusetts and numerous other enlightened communities, to

*Read before the Medical Society January 26, 1916.

the archaic and ofttimes cruel systems provided by laws which are still in force in a few States and in the District of Columbia. However, in nearly every jurisdiction the initial move is to obtain certificates—usually two—from qualified physicians. If a physician gives such a certificate without an honest belief, based on his personal knowledge, he ought to be made to pay the penalty for his negligence no less than for his wrongful intent, and time and again this burden has been placed on the makers of such certificates.

Numerous provisions have been made in the laws of the several States for the protection of the patients, as, for example: In New York the certificate can only be given by one who is registered as an examiner in lunacy; in Massachusetts the physician must have been licensed for at least three years immediately preceding the issuance of the certificate; in New Jersey the physician must be a permanent resident of the State and have had at least five years' actual practice of his profession; in the District of Columbia, the physician—unless he be a commissioned surgeon of the United States Army, Navy or Public Health Service—must be a permanent resident of the District, actually engaged in practice for at least three years, not related to the patient by blood or marriage, and not financially interested or officially connected with the institution in which the patient is to be confined.

When the medical practitioner is called upon to give a certificate as to the insanity of a person it may be that there exists in his mind an uncertainty as to whether the mental condition of the patient is such as to bring the case under what the law terms "insanity." While medical men are getting away from the use of this word as a definite description of mental disease it is, nevertheless, still in very constant use in the decisions of the courts, and it might be well for the general practitioner who entertains doubt as to the inclusive meaning of the word to be acquainted with the fact that the Supreme Court of Maine (Johnson *vs.* Maine, etc., Insurance Company, 83 Maine, 182), held that whether mental unsoundness be congenital or a result of arrested mental development, of religious excitement, of physical disease, of old age, or of unknown causes; whether it be casual, temporary, or permanent; whether it be manifest in the mildest dementia or the wildest mania, it is expressed by the term "insanity."

The penalty for giving an improper certificate varies, but usually it is a sufficient one to make the guilty party realize the importance of his wrongful act. In Rhode Island this penalty is a fine not exceeding $500, or imprisonment not exceeding five days; in Colorado to act as a medical examiner in lunacy cases without authority from a judge of a court of record is punishable by a fine of from $50 to $300, or imprisonment from 30

to 90 days, or both; in Vermont a physician who signs a certificate without making a previous examination is liable, if the patient is admitted to a hospital for the insane upon such certificate, to be imprisoned not more than two years or fined not more than $1,000, or both.

The privilege of personal liberty is a constitutional right and can only be denied by due process of law; when, therefore, due process of law as regards one alleged to be insane demands medical certificates as a condition precedent to deprivation of liberty, the subject becomes one of a very high degree of importance, and the responsibility resting upon the makers of such certificates is a personal responsibility which should never be assumed except upon a basis of personal knowledge.

It so happens that sometimes the physician in charge of a case asks a younger practitioner to join him in making the required certificates, and deference to the senior in years leads the junior to concur in an opinion without making his own examination. This courtesy—if it may be so styled instead of being termed by a harsher name—has brought a good deal of discomfort upon the younger men when called upon in court to defend their written statements. To be sure, the history of the case, as it comes from reliable sources, may be given consideration in forming the professional opinion, but this cannot be the sole basis for such opinion, and not only may the case fail, but the physician may find himself in an unfortunate situation if he has not fortified his position by supplementing the history with his own personal observations.

An experience in the trial of many cases of this nature leads me to emphasize the importance of the medical witness speaking in language easily understood by the laymen constituting the jury, and endeavoring to make clear, to both the jury and to the court, the reasons prompting him in reaching his conclusions. The professional learning and attainments of the medical witness are not demonstrated by his use of technical medical language, but rather by his ability to translate medical terms and medical deductions into language which shall be clear and unequivocal to men not acquainted with the terms, the distinctions, or indeed with the general professional language of medical men. The usual proceeding looking to the commitment of an insane patient is in the nature of a hearing and not a trial, and the burden resting upon the medical witness is to acquaint the court and the jury with all the facts within his knowledge which may be of assistance in deciding the case, supplementing these facts, when permitted so to testify, with his professional opinion.

The physician is not permitted to disclose confidential information acquired in his professional capacity. Section 1073 of the Code of Law for the District of Columbia provides:

"In the courts of the District of Columbia no physician or surgeon shall be permitted, without the consent of the person afflicted, or of his legal representatives, to disclose any information, confidential in its nature, which he shall have acquired in attending a patient in a professional capacity and which was necessary to enable him to act in that capacity: *Provided,* That this section shall not apply to evidence in criminal cases where the accused is charged with causing the death of or inflicting injuries upon a human being, and the disclosure shall be required in the interests of public justice."

Similar prohibitions are found in the laws of other jurisdictions. It must not be overlooked that the privilege belongs to the patient, that it exists for the benefit of the patient and not the physician, and that any waiver of the privilege must come from the patient or his legal representatives.

In this connection it should be mentioned that statutes of this nature have, in a number of instances, been construed as not applicable to physicians in charge of State hospitals for the insane. It has been held in New York (Liske *vs.* Liske, 137 N. Y. Sup., 176), that physicians in charge of such institutions can testify as to the mental condition of their patients upon the theory that the relation arising by operation of law between a patient committed by legal process, and the official physicians in charge of the institution, is not the professional relation contemplated by Section 834 of the Code of Civil Procedure of that State.

Passing to cases of adjudged lunatics, we find the responsibility of the physician confined largely to the question of retention in custody. This question is presented when the patient, or someone in his behalf, undertakes to secure release from confinement. It may be that the request is addressed in the first instance to the medical officers in charge of the institution in which the patient is under treatment. These physicians, particularly in large Government and State hospitals, do not lean toward retention, but toward discharge. This is true, even though it be a reversal of the practice some time in vogue in public as well as in private institutions. And this is as it should be, viewing the problem from the humanitarian standpoint. The responsibility is strongly upon the physicians in charge whenever such an application is presented to them. If a patient is discharged and he commit crime, it may well be that the physician will be called upon to defend himself in an action for damages to injured parties.

The responsibility of the hospital physicians was very fully considered in a case decided by the Supreme Court of Washington in January, 1915 (Emery *vs.* Littlejohn, *et al.,* 145 Pac., 423), reported in the *Journal of the American Medical Association*

and in various legal publications. It appeared from the evidence in that case that one "P" had been committed to a State hospital for the insane, that he had never manifested suicidal or homicidal tendencies, but was suffering from delusions that persons —especially detectives—were pursuing him to do him injury. Physically he was in a normal state of health. After he had been in the hospital about two weeks, he was released by the superintendent, Dr. "C," and placed in charge of his mother, who signed a writing usually required of those taking patients from the hospital, to the effect that she had taken this patient on parole, knowing that he was not fully recovered, and that she assumed all responsibility for his actions, and that she agreed to care for him and return him to the hospital if necessary. This release was in accordance with a statute of Washington, providing that "any patient may be discharged from the hospital when, in the judgment of the superintendent, it may be expedient." The mother took the patient to her home, where she was residing with her husband, the patient's stepfather. While in the hospital the patient had apparently made rapid improvement, and this seemed to continue while he was at home. After he had been home about ten days, two police officers of Tacoma reported to his parents that the patient had been writing love letters to and alarming an actress in a local theater. The parents of the patient thereupon furnished him with money to visit relatives in Missouri, and he went to Seattle for the purpose, as his parents believed, of making the eastward journey. Instead of going to Missouri, however, he went to Portland, Oregon, where this actress was then performing. The evidence showed that during a performance the manager was told that there was a man in the hall off the stage, who wanted to see one of the lady performers. The manager testified that he walked up to the man, who was none other than the paroled patient, and observed that he wore a deputy sheriff's badge turned upside down. The manager, fingering the badge and, turning it so that he might read it, asked, "What kind of a badge is that?" whereupon the patient responded, "What have you got to say about it?" and pulled his gun and shot the manager. Of course, whether or not negligence could be attributed to any or all of the defendants was a most important point in the case. The court defined negligence as "The omission to do something which a reasonable man, guided by those considerations which ordinarily regulate the conduct of human affairs, would do, or the doing something which a prudent and reasonable man would not do. The standard is not that of a particular man, but of the average prudent man." The superintendent of the hospital defended himself on the ground that he could not be held personally liable for the release of the patient, as this was an act which rested in

official discretion, and no abuse of discretion or corrupt motive had been shown. The Supreme Court of Washington, consisting of nine judges, divided on the subject of legal responsibility of the three defendants, viz.: the superintendent, the mother, and the step-father. A majority of the court exonerated both the doctor and the step-father, but held the mother of the patient to be liable, and this despite the opinion of one judge that the mother was the least blamable of all, and that the doctor was the most culpable. In reporting this case, the *New York Law Journal* (February, 1915) also refers to a recent decision of the New York Court of Appeals (Hall *vs.* New York Tel. Co.), in which that tribunal held that, "The law requires that the injury must so directly result from a wrongful act that, according to common experience and the usual course of events, it might under the particular circumstances have reasonably been expected," and that in the case of an insane person who has shown homicidal or other violent proclivities, any person who assumes the responsibility for his being at large may be held liable for the consequences of his acts.

If a patient be retained in custody, without sufficient warrant of law, the physician assuming this responsibility is liable to be required to defend himself in appropriate proceedings. It may be, however, that in a given case the hospital superintendent has passed up the question for a court decision, or that application has been made to the court in the first instance. This materially lessens the responsibility of the physician having the patient in custody, and in such cases it is usual that the physician gives the court the benefit of his professional observations and deductions, and the court—sometimes with the assistance of twelve men who know nothing of medicine—assumes the responsibility of saying whether or not the patient is sane or insane. If the application for discharge be made to the hospital authorities, it ought, as a rule, be passed upon by such authorities, and a responsibility assumed either by discharging or refusing to discharge the patient without passing the question on to a legal tribunal. This practice is open to the one important exception, of course, of those patients who have been committed by a criminal court after trial or with an indictment pending. It will be recognized that in such instances the hospital acts as a jail and the custody of the patient rests with the court.

A very considerable number of insane patients try to secure liberty through *habeas corpus* proceedings, so many, in fact, that in some States a cry has been raised against what is termed an abuse of the great writ. A responsibility rests upon the physician in private practice who undertakes to oppose the opinions of competent hospital physicians in cases of this nature. More and more it is coming to be universally recognized that the

physicians connected with a hospital for the insane are as anxious to bring about recoveries as the physician who treats a case of typhoid or the surgeon who performs an appendectomy, and so the courts are giving more weight to the opinion of the hospital physician when he says a patient cannot be discharged without danger to himself or to others, and the physician who controverts such an opinion assumes the responsibility of so defending his position as to convince the court of his absolute good faith no less than of his professional knowledge of the particular form of mental disease attributed to the patient.

With respect to property rights, it not infrequently happens that the family physician must advise as to whether a patient can make a valid deed or contract, or whether he can make a will. If the patient has been adjudged insane he cannot, under the law, make a valid deed or contract except a contract for necessaries; but even though the patient has not been adjudged insane it may well be that the physician ought to prevent his making a deed or entering into an agreement if the mental condition of the patient is such as even to create doubt of his capacity to thoroughly comprehend the entire transaction in all its phases. This situation often arises in the cases of paretics who, during one stage of their mental disorder, are prone to enter into contractural relations. While a contract may be set aside upon a showing that one of the parties thereto was a paretic at the time of signing the contract, it is, nevertheless, the part of wisdom to prevent such a patient from entering upon any such relation. If the patient insists upon making a contract for a purpose not approved by his family and physician, and they have advance knowledge, they should by all means formally protest to the other party to the contract, in the hope of forestalling its execution, or for the purpose, at all events, of strengthening the effort which may be made later to have the contract set aside by judicial decision.

One of the most important occasions on which a physician must assume a responsibility as to the mental condition of a patient arises when he is asked whether the patient is of sufficient mental capacity to permit of his making a will. This question arises as to patients who have never been adjudged of unsound mind as well as to many who, regardless of an adjudication of mental impairment, may yet have testamentary capacity. The class of adjudged lunatics who can make valid wills is a relatively small one, and it usually happens that such wills as they make are prepared under the careful and critical eye of men particularly trained as to mental disease and quite familiar through more or less lengthy personal association with the idiosyncrasies of the particular patients. Far greater in number are the instances of persons of advanced age and impaired mentality who have never

been inmates of institutions for the treatment of mental disease, and who are about to undertake to make a testamentary disposition of their estates. Fortunate, indeed, is it for the beneficiaries under such a will if they can have the would-be testator examined by one or more capable medical men prior to the execution of such an important paper. The tests to be applied by the physician should be directed along two lines. The first, of course, is the general mental condition of the patient, but closely allied to this is the attitude of the individual toward those who would naturally be the recipients of his bounty—those who are closely related, have long assisted him in business, have cared for him in illness, or who otherwise with propriety might expect to participate in such distribution as the law permits him to make of his share of this world's goods. It is necessary that the physician who is consulted should know the proposed scheme of distribution, and he should insist on this information, declining to give an opinion if the whole plan is not laid bare to him.

It has been held that the test of testamentary capacity is not the ability to make the particular will in question, but the ability to make *a* will. In other words, it is not sufficient that the patient have a fairly good idea of the terms and provisions of a particular will that he is about to execute; he ought to be able in his own mind to justify this as against other forms of disposing of his property which might within reason suggest themselves to him or to others more or less familiar with his affairs. Any testator always has a variety of ways of disposing of at least a portion of his property, and so the executed document is in itself a demonstration of the choice of the maker. Mercier says, "The highest faculty of the mind is the ability to choose," to which we may add the whole scheme of living is really the making of one choice after another. Now the patient approaching senility may not have many indications of possessing the highest faculty of mind, but he must have sufficient mental caliber to satisfy the physician that the proposed will is really one that expresses his choice. Mental unsoundness, it has been held, does not of itself destroy testamentary capacity, unless the will in question be the direct offspring of the delusion. An adjudication of insanity, as has just been pointed out, is not conclusive as to the patient's mental incapacity to make a will, such adjudication only being conclusive of the fact that at the time it was made the patient was without mental capacity along certain lines. In general, it may be said that the tendency of the courts, although there is a lack of uniformity on the subject, is to permit the will of a person suffering from mental disease to stand as valid unless there is clear evidence that at the time of its execution the testator was mentally incompetent to make a will. This subject is considered at length in several text-books, one of the

most recent being White and Jelliffe's "Treatment of Nervous and Mental Diseases," in the chapter on "The Application of Legal Measures in their Remedial Bearings."

The physician must be guided by these general requirements in determining the important question of testamentary capacity, and if, in the light of the foregoing, such capacity is lacking, the patient ought to be counseled to postpone the proceeding in the hope of mental improvement, or the family advised that the patient should be permitted to die intestate. In the latter event, the Statutes of Descent and Distribution will generally make an equitable distribution of the estate, and, at all events, they will provide a legal distribution, the burden for any inequalities resting upon the deceased for not having made a will when mentally able so to do.

There remains for our consideration the general responsibilty to better the condition of the insane. This is incumbent upon all persons who are *sui juris,* but it rests with peculiar emphasis upon the members of the medical profession. To better this condition there should be proper commitment laws, based on the hospital conception of insanity and divorced from every suggestion of a criminal proceeding; provision should be made for voluntary commitment, so that treatment for mental disorder may be obtained with the same facility as treatment for typhoid fever; there should be limitations upon the growing use of the great writ of *habeas corpus* by litigious paranoiacs and medical men saved from harassment by the demands of these writs; and, greatest among these general responsibilities resting on the profession, is the duty of bringing about a better understanding of hospitals for the insane. The very best medium for educating the public as to the modern hospital for the insane is the family physician. He it is who enjoys the confidence of the persons whom he serves, and he it is who has—or should have—an intelligent appreciation of the advantages and the accomplishments of these great public agencies. The old horror of the general hospital came from the belief that it was akin to a mortuarium, that all who entered as live men came out as cadavers; but now the public realize that the sick man who enters, in time generally comes out restored in health. The ancient view of the hospital for the insane likened it to a jail and more often word-pictured it with the cruel term of madhouse. Taken in time, the cases of mental disease treated in such an institution now make a goodly percentage of recoveries; to all intents and ordinary purposes these recoveries are at least sufficient to permit the patient resuming his place in society.

The practice of medicine has always been attended with grave responsibilities. The well-qualified, earnest practitioner does not shirk these responsibilities, for they have come to be a part of

his daily professional life. To no one other single class of patients do these responsibilities attach in greater number or degree than to the insane. The physician, keeping always within the law, must protect the insane man from himself and from those who would do harm to him or to his property. He must do his part in preventing the insane man from doing violence to the person or property of others. He must strive to prevent the insane man from committing an offense against the law, and if such an offense has been committed it is the duty of the physician to seek to save the transgressor from being punished by law.

The law, from the early days of the reign of Edward I, has sought to stand guard over the insane and their property. But the law acts in such matters upon the certificates, the affidavits and the testimony of medical men. The very conscience of the law is charged with these solemn duties, and the responsibilities which the law, in turn, places upon its medical advisers go to the very root of professional learning and personal integrity. He who engages in the practice of medicine accepts these responsibilities, and he must needs give diligent attention thereto, for he is answerable to his personal conscience, to the traditions of his honorable calling, and to the law of the land.

Dr. W. A. White had listened to the paper with great interest. Mr. Fenning, of all lawyers he had ever heard speak, made a noise most like a doctor. It was rather a thankless task for a physician to talk of the doctor's responsibility for the insane patient when the Supreme Court of Washington had made the question so simple. We deal with ordinary men when framing laws and then we find ourselves under the necessity of adapting these laws to extraordinary men. With regard to the dangerous insane patient, our duty is to safeguard the interests of the patient unless or until those interests cross the interests of the public. The method employed at the Government Hospital for the Insane to determine the question of the advisability of the parole or release of the patients under treatment there, is to obtain the verdict of a general staff conference; at such a conference the record of the patient is presented, the patient himself is examined, and the total information obtainable about him is taken into consideration; opinions are then expressed and recorded. Thus the public and the hospital staff are alike protected before these patients are set at liberty. It often happens that the doctor can discharge his duties in these cases very easily; but

*According to a German exchange, a Berlin court recently decreed that a physician should give his testimony as to the mental soundness of a patient, whose will was being contested, on the grounds that the man had been mentally incapable. The physician declined to testify, but the court enjoined him to speak freely, saying that the death of his patient had released him from the obligation of professional secrecy, as long as the matter was not one that concerned his former patient's good name or reputation.—*Editor.*

sometimes very knotty problems arise. An old man came into the hospital on a temporary commitment, with a considerable sum of money on his person; in a day or two there appeared some men, accompanied by a lawyer, and they gave very good reasons indeed why this money should be turned over to them. Dr. White had no right, however, to give up the money, and refused; it later transpired that they had no right to it, but were taking advantage of the old man's condition. The suspicion that hospital authorities unwarrantably detain patients who are not insane or who have recovered their sanity is hard to down. He could recall that a former member of this Society went so far as to testify before a Congressional committee that the superintendent of an insane hospital should discharge a patient at the moment of recovery, even if physically ill at the time, basing his testimony on the constitutional right of the individual to his liberty. It must always be remembered that mental disease is like other disease—persons are never all well, neither are they ever all ill. Therefore, we must fit the cases to the law as well as may be; full consideration in good faith of the rights of the public as well as of the rights of the patient will usually serve to keep the physician clear of legal difficulties. The moral obligations in these cases are often very difficult to determine, especially with regard to dealings with relatives; these difficulties are especially marked in the case of paretics, where it is almost impossible to get the relatives to understand that these patients are so ill. Dr. White expressed again his appreciation of the paper. There should be a great advantage in frequent similar conferences between lawyers and doctors, with a free sharing of their respective mental attitudes.

Dr. Hickling said that there are many viewpoints from which to discuss this very interesting subject, two of which to him seemed of special interest. The first had to do with the fact that the modern conception of mental disease has brought us to the point where we are able to recognize the early and even, in many cases, the premonitory symptoms; in mental disease the early symptoms are better marked than in many other systems of the body. When such early diagnosis is made, however, we are very often unable to take advantage of it, partly because the true state of the case is not realized by the family or friends of the patient, and often because there is no place to which such patient can be sent, unless at great expense. In this District such a patient cannot be treated at the Government hospital unless he is a pauper or dangerous to the community; private sanitarium treatment is too expensive for the great majority. The second point is that insanity is not now a medical term at all; it is a legal term, signifying irresponsibility. A man in the early stages of manic depressive, praecox or paresis cannot be adjudged insane

until the disease has progressed to a dangerous degree. The question of the presence or absence of mental disease is purely medical and should be so retained; responsibility is a legal matter and should be legally determined. In psychiatry we have sufficiently advanced to make a definite early diagnosis in many cases and to effect a cure; there has been no such progress in the legal aspect of the matter; this should be corrected. The tendency is toward a better understanding in the local courts, but the situation is far from satisfactory. At present commitment is made temporarily on the certificate of two householders and of two physicians and the patient is taken to the Government hospital. Within thirty days the law requires the appearance of the patient in court, not for the purpose of admitting him to the Government hospital, but to decide whether he may stay there or not; this is done regardless of the wishes of the patient or his family. It would seem that this needs adjustment.

Dr. Kober asked if there is notnow pending in Congress a measure having to do with providing for voluntary commitments?

Mr. Fenning replied that such a bill was under consideration in the last Congress, but failed to come to vote. The bill had been reintroduced in the present Congress.

Dr. Kober had made the inquiry because he felt that such a provision is of the utmost importance; very many need to take advantage of such a means of securing treatment of threatening mental disease, and many would embrace such an opportunity. The voluntary commitment is a most valuable preventive measure for incipient cases of mental disease; indeed the straw that breaks the camel's back in many of these cases is the strain involved in appearing in court for legal commitment. He urged that members of both the legal and medical profession make good use of any opportunity to bring about the enactment of this bill. There are many persons predisposed to mental disorder who can be saved from a final breakdown by prompt treatment in a properly equipped hospital. When we consider that the District maintains from 1,500 to 1,600 inmates at the Government hospital at an annual cost of over $375,000, there appears to be an important economic reason to add to the humanitarian reasons for providing for the prevention of insanity.

Dr. Williams had enjoyed the thesis presented by Mr. Fenning; it focused accurately what we need to do in this legal and sociological problem. We have heard from the lawyer, the alienist and the sanitarian; Dr. Williams wished to speak from the purely neurological standpoint. Insanity *per se* is a sociological problem; all the medical man can do is to diagnose a mental disease and then make a prognosis as to the sociological future. In paresis, for example, we can confidently predict a future insane state. The physician is thus confronted with situations

where his patients may be potentially dangerous men, but not legally insane; the physician therefore needs to be able to control such a situation. It is not mandatory to commit such patients; it is often better to impose the proper control under private auspices.

Dr. Bullard had enjoyed and profited by the address. As representing those interested in sanitarium treatment of the insane, he would confine his remarks to expressing regret that physicians delay so long in sending insane patients to hospital for treatment; the opportunity for cure is thus often lost.

Mr. Fenning concurred quite fully in the remarks made by Dr. White and by Dr. Hickling. He was glad Dr. Kober had inquired about the voluntary commitment bill; the remarks thereupon were very pertinent; Dr. Kober always says something worth while. The bill for voluntary commitment provides for voluntary admission into the Government hospital; to avoid the unconditional surrendering of liberty, there is a provision by which a patient may get his liberty again on three days' notice. At the last session of Congress this bill got no further than the hearings in committee; he hoped the Society would urge its passage by the Congress now sitting.

THE PROTECTION OF THE CHILD FROM TUBERCULOUS AND KINDRED ILLS THROUGH AN ADEQUATE SYSTEM OF SCHOOL HYGIENE.*

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It seems to me very appropriate that we should have a paper on School Hygiene on this occasion, as it was a subject in which General Sternberg was deeply interested. He was the father of the open-air school in Washington, and in his death social workers have lost their leading exponent. The conservation of the health of the school children, comprising one-fourth of our population, is one of the important problems of preventive medicine. The great watchword of the times is efficiency—efficiency in the body politic, efficiency in the home, efficiency in industry and efficiency in education. Has there been efficiency in health measures commensurate with the progress in other lines of human endeavor? The State has been especially alert to adopt any measures that would tend to develop or improve its system of education; yet the very foundation of its life, intellectually

*Read before the Medical Society January 19, 1916.

and morally, the physical health of its children, has been neglected. It has been found, by intensive studies, that 60 per cent. of all children have physical defects which interfere with their school work and need correction; that 2 to 10 per cent. have physical defects so serious as to practically nullify their school work and make their education an economic waste. It has also been found that 90 per cent. of all school children that have reached the age of fifteen have become infected by the tubercle bacillus.

The child is the greatest asset of the nation, and the barometer of its most successful development is its physical well-being and intellectual attainments. The efficiency of the school child must depend on several factors; namely, the school inspector, the school nurse, and school hygiene correlated with home hygiene. The first attempt at school inspection was made in Boston in 1894, and was for the detection of contagious diseases. Then it was broadened to include the detection of deformities and defects which retarded the intellectual development of the child, and now, in some communities, includes everything which concerns the physical betterment of the pupil. The keynote of efficiency of medical inspection should be a supervisor, receiving adequate remuneration to justify giving his whole time to the work. He should not only supervise and correlate the work of the school inspectors and nurses, but should formulate regulations for their guidance, and should be consulted by the architect with regard to the plans for construction of all new school buildings. There should be a sufficient number of inspectors to give each child a complete examination, not only on his entrance to the public schools, but every year until his graduation.

This would not only include an examination for infectious and parasitic diseases, but should include the eye to detect not only inflammatory conditions but defects of vision, the ear for discharges and deafness, the mouth for decayed teeth, adenoids and enlarged tonsils, the nose for deformities and catarrhal conditions, the heart for valvular disease, and the lungs for tuberculosis. The cervical glands should be especially examined, as phthisis in childhood often first manifests itself there. Any deformities should be noted. The general condition of the child, whether suffering from anemia or malnutrition, his weight, height and chest expansion, are all of great importance.

In addition, he should be tested by the Binet-Simon method to determine his mental capacity, and the results should be placed on a permanent card, which should go with the child from class to class to govern the teacher in the handling of this particular case. Any system of medical inspection to be thorough must include the *teacher,* on account of her close association with the pupils. The necessity for such an examination was well illus-

trated in the cases reported by Dr. Hess in which a tubercular attendant, not known to be such at the time, was placed in charge of ten infants, three of whom had responded to the Von Pirquet test before this attendant was assigned. She was in close contact with them for six weeks before her condition was discovered. An examination of these children three months later gave a positive reaction in every instance. As these infants did not come in contact with the outside world, the infection had to come from within. The protection of the school child from infection by the tubercle bacillus can only be obtained by the exclusion of the open case of phthisis, be it teacher or pupil, from the public school system. This would be no great hardship, as cases showing tubercle bacilli in the sputum are rather rare in children, and are unquestionably too sick to be benefited by school attendance. Cases of closed tuberculosis, which is a common type, should be segregated in open-air schools. Not only because this is the ideal method of treatment, but because we can never tell when a closed case will become open and do incalculable harm before detection.

The school *nurse* is a very essential part of the school system. She should be a clearing house for the school inspectors, and should not only be a graduate nurse but one having special training in this special field. Added to her ability to detect disease, communicable or otherwise, defects and deformities, she must display a wonderful amount of tact and judgment, as her work, in order to obtain its highest fruition, must partake of a social service character. A daily inspection should be made of all pupils. Cases needing medical attention should be referred to the school inspector for disposition. This vital part of the school inspection service is at present rendered by the teacher, which is a very weak link in the chain. Of course, this is done on the score of economy, as it would require many nurses to give daily examinations. We do not hesitate to give every child a teacher, at an enormous expense, to develop his intellectual side, why then should we hesitate to give every child the opportunity to develop his physical side? If the teacher is to assume this function, she should have special lectures and special clinical instruction to fit her for the task.

In addition to her work in the school, the nurse should be the connecting link between the school physician and the parents. When the pupil is sent home with a note that his defective development, mental and physical, is due to adenoids and enlarged tonsils which should be removed, the advice is often disregarded, unless a personal interview is had with the parents, and the advantage of such a step clearly and strongly brought to their attention. In addition, the family physician should always be notified why his patient needs operation or medical attention, or

for what communicable disease he has been sent home, so that the aid of the physician can actively be enlisted to have the conditions corrected. There can be no question of the importance of this procedure, as a family in the last equation will be governed by the advice of the family physician. Cases of malnutrition and anemia are often due to conditions in the home—bad ventilation, overcrowding, underfeeding, poverty. These things it should be the duty of the nurse to investigate and, if possible, to correct. This is the place where great judgment and tact must be employed. She should bring to bear all the agencies that are concerned in the relief of the unfortunate—*i. e.*, hospitals, dispensaries, charity and relief associations, so that a combined effort could be made to change the conditions at home which have a bearing on the physical development of the child.

School hygiene embraces everything that pertains to the welfare of the child: The general sanitary condition of the building, proper lighting, individual drinking cups or bubble fountains, overcrowding, proper hours of study and recreation, suitable playgrounds, and, above all, proper heating and ventilation. The whole problem of proper heating and ventilation of buildings is in a condition of readjustment at this time, due to a series of reports of experiments done by different observers, which have given us an entirely different conception of what fresh air really means. It was formerly supposed that bad air meant air containing organic impurities from the breath, excess of carbon dioxide and consequent lack of oxygen. We know now, according to these reports, that this means air which is of a high temperature, large amount of moisture and has lack of movement, as the cause of our discomfort in a close room is interference with the normal rate of loss of body heat. Therefore, by fresh air we mean cold, dry air in motion. Fresh air does not necessarily mean pure air, as it may still be fresh and contain bacteria and foreign substances. These conclusions are so radical that it would seem better to accept them with some reservations, as boiled down they might mean that stale air, plus an electric fan. is as good as fresh air.

Before these theories were promulgated, the Anti-Tuberculosis Society drafted certain resolutions on ventilation and heating which were sent to the school authorities and which are as follows:

1st. That the Board of Education be requested, as far as possible, to provide that all recitation rooms in new school buildings be supplied with French windows reaching 2½ feet from the floor to within 6 inches of the ceiling, so that the pupils may have as much fresh air as possible.

2d. That suitable provisions should be made for outside playgrounds, with a covered pavilion at one end for use in inclement

weather, and that rooms used at present for recreation purposes should at all times have windows wide open and no artificial heat.

3d. That the school teacher be required to keep the temperature of the classroom between 60 and 65 degrees when artificially heated.

4th. That continuous and sufficient ventilation be kept up in classrooms at all times, and that windows be kept completely open at recess periods.

5th. That a record of the temperature and humidity of the classroom be taken three times a day.

It is also extremely desirable, when artificial heat is used, to introduce an amount of moisture sufficient to bring the relative humidity of the air to between 50 and 60 per cent.; 100 degrees being complete saturation. There can be no question of the fact that the outside air contains all the ingredients that are necessary for our physical welfare, and that the nearer our ventilating systems approach this the nearer we approach perfection.

We believe that the whole question of ventilation can be solved by open-air schools or fresh-air rooms. There are three types of outdoor schools. 1st. The school where tubercular children are segregated in an open structure away from their classmates, where a regular schedule of study, exercise, rest and play is worked out. 2d. The open-air school for run-down children, who are gathered together in ungraded classes, and where allowance is made for food, rest and study. 3d. The ordinary run of children in the ordinary classroom, where the windows are kept wide open all winter, where extra clothing is furnished, and a liberal amount of exercise is prescribed. The first school in Washington to adopt the fresh-air method in one of its classrooms was the Blake, which did so in 1911. In order to determine the good effects of such rooms on the health of the children, it was determined to have this room compared with a closed one, with the same run of children, and have the health office test these two rooms during the year to determine their relative efficiency. This was done with the following results:

A comparative study of the results of the three examinations of the pupils remaining in the fresh-air class and the school of control shows a decided and continuous gain in weight for the pupils in the former class, whereas for the pupils in the latter a gain was shown for the first half of the year for practically all, but during the last half nearly 50 per cent. exhibited loss of weight. The greatest gain in weight among the pupils in the fresh-air class was 15½ pounds, and the smallest was one-half pound, while among the pupils of the school of control the greatest gain was 7½ pounds and the smallest was 1¾ pounds. The average gain in weight for the fresh-air class exceeded the

average gain for the school of control 2.49 pounds. In height, both classes showed a gain, but the average for the fresh-air class was .39 inch greater than that for the school of control. That fresh air must have a decidedly stimulating effect upon breathing was shown by the fact that the average chest expansion of the pupils in the fresh-air class increased during the year from 2.19 to 3.25, a gain of 1.06, whereas the chest expansion of the pupils in the school of control increased from 2.47 to 3.00—a gain of only .53 of an inch. As to the beneficial effects of fresh air upon the pupils attending such classes, using the normal weight for a basis of comparison, 12 pupils, or 70 per cent. of the fresh-air class, were found to be below normal at the time of the first examination; but by the end of the year only 6, or 35 per cent., were below normal weight, whereas pupils attending the school of control showed upon the first examination 11 to 81 per cent. below normal, which condition was found unchanged at the end of the year. The teacher reports as follows: "So far as I can judge, the gain in mental alertness, in accuracy, in interest, in energy, and in initiative has been, if anything, more marked than the physical gain. My school is never listless or apathetic, whatever else it may be. To quote from the children, 'they are coming up in all their lessons since they have been in the fresh-air room.'"

Two years later a fresh-air room was started for run-down children in the Stevens school. No tubercular children were received, yet these were the ones most in need of it. The following is the report from this school: The pupils in the fresh-air class at the Stevens school, with the exception of one child whose weight remained stationary, gained during the year. The gain varied from 91 pounds for the highest to 2 pounds for the lowest, the average gain for pupils being 3.66 pounds. In height every child showed an increase. The greatest gain in height was 2.50 inches and the smallest .25 of an inch, while the average gain was 1.23 inches. The average chest expansion, as was the case at the Blake, showed a decided increase from 2.21 on the first examination to 2.40 at the time of the last examination, a gain of 1.19 inches. The physical appearance of the pupils in this class showed at the end of the year a very marked improvement over their appearance when they entered the class. Upon being questioned, the children generally expressed the hope to return to the fresh-air class next year. These records coincide with the reports from other cities. It has now been universally tried through the United States, and the same glowing reports come from each section, and the very fact that these schools are multiplying rapidly shows that the public is awakening to the great benefit conferred upon the children by so simple a measure.

With regard to school inspection in the District, there are 53,000 school children in 160 schools. For this army there are only ten inspectors actually doing inspection work, and one supervisor, and recently there have been added five nurses; 16 persons to educate in health measures 53,000 children scattered in 160 schools. No complete examinations are made, and the teachers determine which pupils are to be seen by the inspector. The inspector gives three hours of his time each school day and the nurses full time. The nurses at present are used principally to persuade the parents to have defects, found by the school physician, corrected. A child with tuberculosis can be excluded from the public school system according to the regulation which says that pupils can be excluded with a disease prejudicial to anyone else; but as the inspector is not allowed to remove any of the child's clothing, according to another regulation, one would like to know how this condition can be determined. Children cannot even be examined for adenoids. The great needs for Washington for the conservation of the health of the school children are: 1st. A full-time supervisor; 2d. More school inspectors; 3d. More school nurses; 4th. More fresh-air rooms, and, 5th. Open-air schools for Tuberculous children.

SUPPORT OF THE HEALTH OFFICE.*

By H. W. Wiley, A. M., M. D., LL. D.,

Washington, D. C.

It seems to me that the most appropriate monument that could be erected to General Sternberg would be to make the capital of the United States a model in sanitation and especially in the prevention of communicable diseases, and of these especially tuberculosis. In the splendid service which Dr. Sternberg rendered the people of this country, his work in the prevention of tuberculosis ranks as the most useful and most worthy of commemoration. I would be glad to see a marble bust of General Sternberg installed in the public grounds near the Medical Library, or to see some other proper recognition of the service he has rendered the State. Most of all, however, I would prefer to see as his monument a repression of the scourge of tuberculosis, a more perfect protection against infectious and contagious diseases, and the conservation of the life of the infants that are born in the District. In other words, a proper support of the work of the health officer of this District, activated, as the effort would be, by the influence of Dr. Sternberg's career, would be

*Remarks made before the Medical Society, January 19, 1916.

the most lasting monument and one literally of enduring quality. If the shade of Dr. Sternberg could look back upon an accomplishment of this kind, he could truly say with the Latin poet: "*Exegi monumentum perennius aere.*"

Do we at the present time properly support the work of the health officer? If Dr. Woodward were not here I would not hesitate to say that I think we come near having the best health officer in the country. If, according to the Chittenden theory, partial fasting makes one more effective, we will have discovered the secret of Dr. Woodward's success. He has without doubt been conducting the work of the health office on siege rations. I am proud of the public service of the city as rendered by its fire department, its water service and its sewer service, its police department, its public schools and its public buildings. Compare the vast sums, none too large, in my opinion, spent on these utilities with the small sum given for the protection of the public health. While it is true that there are some things more precious than life, and I may mention among them real liberty and honor, there is nothing that we are likely to regard as more precious from our own personal interest in it than our lives. It is true that we do not have liberty in the District of Columbia. We have a novel condition, which seems to an outsider almost incredible, of a people deprived of every political and civil right, representing the football of politics and the shuttlecock of freak legislation. We have no chance to show our prowess, nor to fight for our own honor, but still we cannot repress the feeling that we want to live, and, even in this state of servitude, to live as long as possible. When our children are born, as a rule, we hope they may live to manhood or womanhood. We are distressed to see dread diphtheria stalking like the advance agent of death throughout the streets and avenues of the city. We are distressed that, even with our improved water supply, typhoid fever is not yet eradicated. We may even hold the health office responsible for this condition. We have a death rate which is higher than that of the rest of the country as a whole. I have only, however, to cite you to the appropriations which have been made for the health service to show how few and meagre are the facilities which have been placed at the disposal of the health office to fight our battles against infection, disease and death.

Usually when the memory of a great man is to be honored an association is formed for the purpose not only of determining the form which the honor shall take, but to raise the necessary funds to carry the purpose of the association into effect. We might, then, well organize a Sternberg association, having for its purpose to increase the facilities of the health office of the District of Columbia in its service to the community. It is evident that not only must the people be interested in this memorial,

but they must also take steps to interest those who are our lords and masters, who make our laws, lay our taxes, spend our money. In other words, we must organize an appeal to the Congress of the United States. It is true that theoretically we have no right to ask how the money that is taken from us without our consent in the way of taxes should be spent, but sometimes even a tyrant may have a tender heart and be moved by the tears and appeals of an oppressed people.

If we could double the present health appropriation we would do our first honor to the memory of General Sternberg. If we could increase the appropriation tenfold we would lay broad and deep the foundations for his monument, and if, finally, we could get a sufficient amount of funds to effectually combat all the infectious and contagious diseases which threaten us we would erect the shaft and engrave the inscription which would be a lasting honor to his memory.

Discussion of Dr. W. C. Gwynn's Paper: "The Protection of the Child from Tuberculosis and Kindred Ills, through an Adequate System of School Hygiene"; and of Dr. H. W. Wiley's Paper: "Support of the Health Office in the Control of Tuberculosis?"

Dr. W. C. Woodward said that he arose with diffidence after the very complimentary remarks made by Dr. Wiley; those who know Dr. Wiley's propensity to say pleasant things about his friends will, however, make proper allowance. Dr. Woodward felt that the suggestion that a monument should be erected to General Sternberg's memory was a valuable one; if such a monument could be made to take the form of an adequate system of sanitary control in the District of Columbia it would fittingly exemplify General Sternberg's life. [Dr. Woodward spoke of his personal relations with General Sternberg, and recounted incidents to illustrate the latter's sense of justice and his habit of determining action upon precise information.] Coming back to the control of tuberculosis in the District of Columbia, Dr. Woodward felt in a measure called upon to give an account of his stewardship. The Health Department had begun in 1913 to take action looking to the segregation of tuberculous public school children. [He read correspondence setting forth propositions to use certain buildings for open-air schools and for the separate instruction of tuberculous children.] The only results of these efforts thus far had been the establishment of the open-air classes at the Blake and the Stevens schools, to which reference had been made. Steps had been taken to get the Commissioners to make regulations forbidding the attendance at school of pupils or teachers suffering from open tuberculosis; these

negotiations were still pending. An examination of the Health Office data in 1915 showed that a number of school children had been reported as suffering from tuberculosis in communicable form. The Superintendent of Schools is in possession of data which would authorize the exclusion of these children from school; but the Health Department has no authority to control the situation. The most urgent need at present is to strengthen the hands of the sanitary authorities, and this depends in large measure on the education of the public. All medical authority in the District of Columbia is responsible to laymen, and thus the laity needs to be educated to enable medical authorities to work unhampered. There is no such dispersion of professional work in any other department of the District Government. Therefore, he had expressed the hope that in building a monument to General Sternberg, it would result in widening and strengthening the sanitary control of the District.

CASE OF POST-OPERATIVE TETANUS, AFTER A CLEAN OPERATION FOR STRANGULATED FEMORAL HERNIA.*

By C. N. Chipman, M. D.,

Washington, D. C.

Mrs. H., family history negative, storekeeper. History of hernia about one year. I was called about 11 P. M. to see her, and found that she had a small non-reducible femoral hernia, that had been unreduced about three hours. I made several attempts to reduce the same, but failed. I gave her morphine sulphate, gr. ¼ hypodermically, and tried again but with the same result. Pulse and temperature normal and no vomiting. She refused to go to the hospital at this time. I was called again about 8 A. M. and found the hernia still unreduced. She was suffering great pain and had vomited once. I refused to give her any more morphine, so she agreed to go to the hospital. I operated upon her at 10 A. M. and found the hernia sack very tense and hard, and on opening it found it contained a great deal of fluid and a knuckle of small intestine that was quite dark but cleared up on opening the sack, which relieved the constriction. The abdominal cavity also contained a great deal of peritoneal fluid. This is noted here as it may have some bearing on what occurred later. The operation was finished and the incision closed with catgut and kangaroo tendon without drainage and a

*Reported to the Medical Society February 9, 1916.

coat of 50 per cent. tr. of iodine applied to the skin. The skin had had two similar coats before the operation. It is needless to say that my assistants and myself wore rubber gloves, face mask, etc.

The seventh day the wound was redressed, and I found a small quantity of dark fluid in the lower part of the wound, but no pus. She had no fever and had not complained of any pain in the wound. She was on full diet. On the fourteenth day she was put up in a rolling chair for one hour. That afternoon she complained of some pain and stiffness in the left side near the wound and left thigh. On examination the wound was clean and had completely healed, so that I could find no cause for the pain. She was of the Jewish race and very nervous, so I thought it was possibly hysteria brought on by being up in the chair too long the first time. I ordered morphine and potassium bromide for her and had her remain in bed the next day, but the pains were worse and the abdominal muscles very rigid. Temperature had been from 99 to 100 degrees F. the previous two days. There was no lockjaw until the sixteenth day, when there was rigid muscular contraction of the entire body. Up to this time she had not had a clonic convulsion.

Dr. E. B. Behrend now saw her in consultation with me. That night she received 1,500 units of tetanus antitoxin in the spinal canal and 1,500 units intravenously. The eighteenth day she was again given 3,000 units of tetanus antitoxin intravenously and again on the twentieth day she had 3,000 units more intravenously. From the fourteenth day she had had morphine sulphate, gr. ¼, and atropine sulphate gr. 1/200, hypodermically every four hours to relieve the pain from the muscular contraction, and chloral hydrate grs. XV, as needed to produce sleep. The tonic condition of her muscles lasted about fourteen days and gradually cleared up.

A question of interest is by what means was she infected with the tetanus organism. The wound being closed airtight was an ideal place for the growth of an anaerobic organism. It seems that there are three ways in which she might have become infected.

1. The catgut and kangaroo tendon. This does not seem likely, as we would have had infections in other cases if we had a lot of infected gut.

2. The skin. This seems more likely when we remember that she had a small store and handled all kinds of vegetables that had been fertilized with manure from the barn. When the hernia came down she tried to reduce it, and it is possible that her hands were dirty from handling the vegetables and in this way infected the skin.

3. Contamination from the intestine itself, by the peritoneal

fluid. Dudgeon and Maybury report the result of the examination of films of the peritoneal exudate in twenty-three cases, showing absence of bacteria in thirteen and a positive finding in ten, while of these ten cases cocci represented as diplococci or streptococci were seen in each instance and bacilli also in two cases which proved to be fatal.

Treatment of Tetanus.—Notes on 231 cases sent in from the British home military hospitals. Of these 98 recovered and 133 died; a mortality of 57.7 per cent. Among the 231 cases only 37 patients are noted as having been treated with antitetanic serum before the onset of the symptoms. Of these 18 recovered and 19 died. The patients treated received from 1,000 units to 147,000 units. The methods used were prophylactic, intravenous injections, intrathecal injections, subcutaneously and injections in the spinal canal. The main conclusion drawn by Bruce from a study of these patients treated therapeutically by antitetanic serum is that it seems highly probable that the serum had little or no effect on the course of the disease.

Tetanus in the Russian Army.—Of 95 tetanus patients, 74—that is 78 per cent.—died, and 21 recovered. The incubation period was from five to thirty-eight days. Those in whom the disease occurred during the first eight days gave 100 per cent. mortality. No benefit could be detected from treatment with antitetanic serum, intravenous or intraspinal, from three per cent. phenol solution: from calcium lactate three times daily in doses of 30 drops of a 10 per cent. solution; or from magnesium sulphate in hypodermic injections of from 2 to 14 c.c. of a 25 per cent. solution, or by intraspinal injections of 15 c.c. of a 10 per cent. solution.

Wolf relates that after the German authorities decreed that every wounded soldier is to be given a preventive injection of antitetanus serum the number of cases of tetanus dropped off almost to zero. Aschoff and Robertson report the results of extensive experimental research and clinical experience with tetanus, which apparently establish that when the symptoms of descending tetanus have already appeared, subcutaneous injections of antitoxin are absolutely ineffectual.

Conclusions.—1. I think that my patient would have recovered if she had not received any antitoxin.

2. From the large number of cases treated abroad during the present war, we find the mortality rate to be from 50 per cent. up. If the incubation period is 8 days or under, the mortality rate is nearly 100 per cent.

3. Tetanus antitoxin is of value as a preventive agent rather than as a curative agent.

4. In treating another case I would use plenty of morphine sulphate, potassium bromide and chloral hydrate; and antitoxin,

intrathecally, intraneurally and intramuscularly around the wound and by the intraspinal route, attempting to block off the point of infection as much as possible.

Dr. Wolfe said that in recounting the steps in the technic observed at this operation Dr. Chipman had not mentioned using a face mask; if a mask was not used it is necessary to consider the possibility of conveying infection by saliva droplets.

Dr. Masterson said that several years ago he had been called to see a child who had received a wound in the forehead; this had been treated at the Homeopathic Hospital and was almost healed when seen by him. Eight days after the injury this child had developed stiffness of the legs, and his gait assumed the character of that of an old man. There was no trismus. In spite of treatment, this child died.

Dr. Frank Leech said that about two years ago a child was brought into the Children's Hospital in convulsions from tetanus. One hundred and ten dollars' worth of serum was used on this child, and a cure was effected.

Dr. Atkinson had had a case of tetanus which developed five days after operation for hemorrhoids; much antitoxin was used both intravenously and intrathecally, but the patient died in about one week. This was the seventh case of tetanus after a hemorrhoid operation, reported in this country. The source of the infection is a burning question; probably the use of uncooked vegetables should be avoided for several days prior to an operation on the intestinal tube.

Dr. Chappell said that in view of the possibility that this infection might be traceable to the bad hygienic habits of the patient, would it not be wise to give an immunizing dose of tetanus antitoxin before operating in such a case?

Dr. Randolph said that the etiology is the important consideration in this case. Where tetanus spores were likely to abound in the intestine, as in this case, the conditions were right for an internal infection, without seeking flaws in the technic to account for it. He was impressed by Dr. Chappell's suggestion of an immunizing dose of antitetanic serum in such cases.

Dr. Atkinson remarked that examinations of human feces will often detect the presence of tetanus spores.

Dr. Rogers had enjoyed the case report. He discussed some of the chances for tetanus infection arising during the performance of an operation under ordinary technical conditions. He inquired what had been found to be the time relation between trauma and development of symptoms in tetanus cases. He had never seen a case get well if tetanus occurred within ten days after infection. All reports he had seen confirmed this.

Dr. Chipman had used a face mask while operating on this patient. As to the prophylactic use of tetanus antitoxin, hind-

sight is better than foresight; but it is not customary to employ antitetanic serum before clean operations. He was inclined to doubt the curative value of the serum in this case. As to the time of development of tetanus symptoms after primary lesion, the shorter the incubation period, the nearer the mortality to 100 per cent.

END-TO-END ARTERIAL ANASTOMOSIS OF RADIAL ARTERY FOLLOWING TRANSFUSION.*

By Daniel L. Borden, M. D.,

Washington, D. C.

Dr. Borden reported two successful cases of end-to-end anastomosis of the radial artery following transfusion. In both cases the Bernheim technique of transfusion was employed, after which the severed radial of each donor was united by an end-to-end anastomosis. [Sphygmographic tracings were presented demonstrating the normal pulse wave three months after operation.]

Dr. H. H. Kerr said that these two interesting cases are of great value. The transfusion idea is very old; its practical use quite recent. The greatest popularity has tended toward the indirect method, but he had always felt that there is no comparison between the two methods; the immediate direct method is the better. The advocates of the indirect method plead the destruction of an artery of the donor as an objection, but Dr. Borden's cases show that destruction need not follow. He congratulated Dr. Borden on mastering the technic of bloodvessel surgery; the possession of this technic is very necessary for the surgeon in many embarrassing circumstances. Such an instance was the accidental division of the external iliac artery in the course of a pelvic operation. Dr. Kerr had been hurriedly called by the surgeon operating in the first instance and had been able to repair the injury, thus saving the patient's leg if not his life.

Dr. C. L. Davis said that the question of the collateral circulation of the wrist and hand may well be discussed when considering the surgery of the wrist vessels. We know that the hand is supplied by the radial and ulnar arteries; there are collaterals from both, meeting through the interosseous vessels of the hand. Will there not be danger of gangrene of the hand if, after the destruction of the radial artery for transfusion, the ulnar artery should later be injured and occluded?

Dr. W. P. Carr congratulated Dr. Borden upon the result in the cases presented. It is not necessary in most cases, but there

*Reported to the Medical Society January 12, 1916.

is a certain satisfaction in knowing that circulation has been reëstablished in an injured artery. There is no danger to be apprehended from ligation of the radial artery; it has been done thousands of times; Dr. Carr had himself tied the radial and ulnar arteries simultaneously without bad results. It is surprising how rapidly collateral arteries will enlarge; he had observed this particularly in the mammary artery after ligation of the carotid. The length of an operation under local anesthesia must be taken into consideration in determining whether to anastomose a cut artery; this may make much difference; he had seen patients do very well for a twenty-minute operation, and then collapse. Transfusion as a therapeutic measure is usually too long delayed.

Dr. J. D. Rogers wished to congratulate Dr. Borden on the success of these cases. Dr. Rogers had seen the operation in the first case and had followed the subsequent course of the donor; there is very distinct pulsation in her radial artery, although it is feebler than on the unoperated side.

Dr. Borden said that the Elsberg method was not chosen in his cases because of his desire to save the intima from injury. Dr. Carr's remarks were of value; it is not necessary to restore the artery after transfusion, but it is distinctly desirable. The time element is negligible, because the operation can be suspended at any time if undersirable symptoms develop. The donor is usually a healthy individual and bears the operation very well.

PRELIMINARY OBSERVATIONS ON THE USE OF THE PERCY CAUTERY IN CARCINOMA OF THE UTERUS.*

By J. D. Rogers, M. D.,

Washington, D. C.

The use of heat by means of the cautery is usually only associated with inoperable cancer. While it necessarily is often used in this lamentable condition to give temporary relief from pain, hemorrhages and foul-smelling discharge, and make life bearable for patient and friends, it frequently makes unexpected cures or remarkable amelioration of symptoms for years, due to the fact that cancer cells are peculiarly susceptible to heat. Heat of 115 degrees applied for fifteen minutes will kill cancer cells and may be made to penetrate tissues two and one-half inches from the cautery point. Its use should not be limited to hopeless conditions, but applied as a preliminary step to all hysterectomies

*Read before the Medical Society February 2, 1916.

for carcinoma, especially of the cervix. The very early cases, when the general condition is good, might have preliminary application of heat and hysterectomy both at one sitting. The application of heat in no way interferes with the performance of a simple hysterectomy or Wertheim radical operation, but, on the other hand, is a valuable preliminary step, as these patients are usually markedly improved and bear this trying operation much better. Heat seems to seal up lymphatic glands and prevent the spread of carcinoma at time of operation and subsequently. One of the benefits following the application of heat is the apparent lessened virulence of metastasis, should it follow in an advanced case after the treatment is applied. The cautery in the hands of many men, notably Byrne of Brooklyn, has given us better results than any other method in the past, of dealing with cancer of the cervix, that most dread malady to which womankind is heir.

To Dr. Jas. F. Percy, of Galesburg, Ill., is due the credit of opening the abdomen so that the degree of heat applied might be determined and injury to bladder and rectum minimized, together with perfecting a most reliable and practical cautery, which can be maintained at uniform heat, without the charring of the tissues which would prevent the deep penetration of heat so much desired. The perfection of this heat method marks a brilliant epoch in the cancer problem, one of the most baffling and disappointing the profession ever had. It is the only cautery, with which I am familiar, which can be always counted on to work as long as a lamp socket of 110 volts is working. It is not an electric cautery, in the ordinary sense, for the reason that the cautery tip is heated indirectly by contiguity and not directly by the electric current. For this reason the patient, no matter what happens to the current, can never be brought in contact with it. The rheostat enables one to regulate the heat to just the required degree.

With the advent of aseptic surgery, we were encouraged to believe the cancer problem had at last been solved. Then came the argument of abdominal versus vaginal route. A few years later came the simple *versus* radical hysterectomy with extensive gland dissection, as advocated by Wertheim. Although Wertheim first called attention to his operation in 1900 with 20 per cent. mortality, which he said he subsequently succeeded in reducing to 10 per cent., this highly technical operation has never become popular in America. Our surgeons, though equal if not superior to continental surgeons, have never been able to attain this low record that they report. In this country a few, especially well-trained men only, have been able to keep the primary mortality as low as 20 per cent. Attempts by others less fitted for this difficult work have resulted in mortality rates too high to mention.

Few American surgeons have a temperament to stand or temerity to advocate an operation which gives a primary death rate of more than one to every four patients operated on, besides the grave post-operative sequelae due to injury to bladder and ureters. The continental gynecologist, with his large overflowing clinic made up of the peasant class who stoically accept their fate, good or bad, may ignore this high primary mortality, but the American layman is temperamentally different, and views with abhorrence an operation which, although it may give fifty per cent. of permanent cures, exacts a toll of twenty-five per cent. of deaths, and a miserable existence attended with repulsive post-operative sequelae, followed by torturing and lingering death, for the other twenty-five. What also makes this high mortality appear worse to the laity is the fact that those that get well, even if told the nature of their disease, which few surgeons tell, naturally keep it secret. If they die the surgical tragedy is known to all. Dr. John G. Clark has well parodied Mark Antony's funeral oration: The evils of cancer operations live after them, the good is interred with their bodies.

The permanent cures obtained are so few that we may discard the Wertheim operation for the cure of cancer of the uterus, except in the hands of a few gynecologists, especially well trained technically, and with large clinical facilities. The sharp knife, unless we are able to cut wide of cancerous tissues, serves only to stimulate into activity dormant as well as active cells, and hasten the end. Bovée has pointed out the grave dangers of using the sharp knife in excising a specimen for examination and correctly advised the use of a hot cautery knife. Many of the rapid growths of uterine cancer are due to ill-advised use of a sharp curette to obtain scrapings for diagnosis.

Our operative results have fallen so far short of our hopes and altogether been so unsatisfactory that many have ceased to seek the coveted goal and now only do palliative operations. Few general practitioners recommend operative procedures for cancer of the uterus, to their patients. In the gynecologic service at the Washington Asylum Hospital it has been found by Drs. Leon A. Martell, Wm. P. Reeves, Robert Y. Sullivan and myself that a relatively small number of cases of cancer of the uterus are presented except the utterly hopeless type in the terminal stage, most of which die in a few days, with no possible chance of benefit, and no attempt by us to operate. I believe that most patients and friends consent to conditions as hopeless and seek no aid. Some surgeons of large experience have gone so far as to say that they have never known a permanent cure of cancer of the cervix. It has been estimated that over 80 per cent. of the cases when first examined by the surgeon are inoperable. "Inoperable" as applied to cancer is difficult of definition, for

cancer varies in its virulence, or perhaps individual resistance to its inroads explains the difference in course, so often seen. We have the prototype in cancer, of phthisis,—some rapidly fatal, some lingering. At present one woman out of eight dies of cancer of the uterus.

Technique of Percy Operation.—The patient is given the usual preparation for major and minor operation, a general anaesthetic administered, a water-cooled vaginal speculum is inserted and a stream of water kept constantly running through it. This speculum is very important to prevent annoying burns of the vagina. The cervix uteri is grasped with a vulsellum and the cautery with small tip gradually inserted. Sometimes it is necessary to use a uterine dilator before inserting the cautery. The coöperator has in the meantime opened the abdomen, grasped the uterus in the palm of his hand and pushed it down so that the cautery will enter as desired. Care should be taken not to get the cautery too hot, which is the usual tendency, and char instead of cooking the tissues. If charred, the tissues will not allow heat to penetrate deeply as is absolutely necessary for success. The cautery should be removed and carbon scraped off the tips occasionally during operation, and larger sizes used as we proceed. As long as the uterus can be held in the gloved hand the degree of heat, reaching approximately 115 to 120 Fahrenheit, is not high enough to destroy normal tissue. Normal tissue will stand a heat of 130 F., without injury. When one part becomes too hot the end of the cautery is moved to a new location. This degree of heat should be maintained for one hour, or until all tissues that were first fixed in the pelvis are freely movable. To do less than this defeats the object of our treatment.

Care should be taken to prevent perforations by the cautery. Perforations through the uterus into the bladder or rectum do not usually give trouble, but perforation through the vagina into the bowel or bladder causes most persistent and annoying fistulas. Extreme gentleness in all our manipulations is of great importance to prevent dissemination. One of the great advantages of the heat method of destroying cancer is that practically no manipulation of the malignant growth is ever necessary. Care should be taken to wipe out the vagina after operation, with gauze sponge and swab vagina thoroughly with Harrington's solution or tincture of iodine to prevent secondary carcinomatous nodules developing in vagina or vulva. Preliminary ligation of both internal iliacs and one ovarian artery is now often done, though at first only advocated to prevent hemorrhage, which is sometimes quite alarming, when the slough comes off in about ten to twelve days. The hemorrhage is ordinarily easily controlled by vaginal packing. This ligation is also of advantage when

the secondary hysterectomy is done, by preventing troublesome bleeding four to six weeks later. Clark, of New Orleans, claims that in this way resulting starvation of tissue is effected with limitation of growth.

Unlike radium and x-ray treatment, the expense is not prohibitive. This should, I think, be considered, for I have had patients whose mental sufferings were added to by the fact that they were financially unable to have radium or x-ray applied after hearing magnifications of its good results by solicitous friends. So many of these women show such marked improvement, both locally and constitutionally, after the application of heat, that we have to be careful lest we become too enthusiastic. The bleeding will stop, the foul odor so offensive to friends and patients disappear, pain leaves, toxaemia diminishes, and these dessicated, cadaverous and hopeless women become transformed into a state of apparent health, with rosy cheeks, clear eyes and buoyant spirits, and are saved from the pitiful life of a morphine habitué. Although many of these cases were previously considered inoperable on account of extension into the parametrium, they are now converted into good surgical risks for simple or radical hysterectomy. If the heat method is previously used we do not have the unfortunate cases that from local conditions are clearly operable but after operation gradually lose ground and die on about the tenth day, from no apparent cause but exhaustion.

Dr. J. F. Percy says: "If the thorough application of heat in the terminal stages as a palliative measure shows such marked improvement, what may we not expect of its use in first and second-stage type of cases. I believe my experience so far with this method warrants the prediction that 70 per cent. of the first and second type of cases will be found free from cancer five years after the application of heat.

"And, finally, it seems to me reasonable to assume that if one case of utterly inoperable uterine carcinoma can, as reported here, be made to live without recurrence for seven years after the application of a certain definite technique, and another similar case is alive and clinically free from uterocervical cancer four years and six months after the same treatment, we can at least hope for a large number of beneficial results when we fathom the full measure of the possibilities to be accomplished by the application of heat in uterine carcinoma."

Dr. E. Gustav Zinke, chairman of the section on Obstetrics, Gynecology and Abdominal Surgery of the American Medical Association, at the annual session held in 1914 said, "I feel it obligatory to speak a word in favor of this treatment of inoperable carcinoma uteri. Since witnessing the work of Percy, in Chicago, last Fall, I have had an opportunity of operating upon two cases of inoperable cancer of the uterus. The results were

most marked and highly satisfactory. The patients gained rapidly in weight, and are today, so far as the eye can see and the finger can feel, in every respect, healthy women." Dr. Zinke followed up his good results with radium.

Dr. Charles R. Robins, in a recent article, says, "When I first became familiar with the Percy cautery method it occurred to me that what would accomplish so much for hopeless cases would add immensely to the permanent cures in those cases where operation was indicated, and, following out this line, I have given a preliminary treatment to cases on which I performed the Wertheim operation. I have had a sufficient number of cases to test this method thoroughly, but the time is too short to warrant report. Clark, of New Orleans, has been working on the same lines and has recently read an interesting paper in which he details his methods and gratifying results to the present time. A note of hopefulness is very cheering when applied to such a dread malady as cancer of the cervix, and in this combination of treatment the number of cured cases, I am satisfied, will be greatly increased, while in using the Percy treatment alone we can really help those cases which have progressed too far for operation, and by relieving hemorrhage, foul discharge, pain and cachexia add to their comfort and prolong their lives."

My attention was first called to this operation at the Mayo Clinic, when Dr. Wm. J. Mayo mentioned a case of carcinoma that previously was found absolutely inoperable, with wide involvment of parametrium, was denied operation, and death predicted to her husband. Six months later she returned to the clinic, after having cautery applied by Dr. Jas. F. Percy, and is was possible to do a hysterectomy. Miscroscopical examination of uterus removed showed the absence of any cancer cells. Drs. W. C. MacCarty and A. C. Broders, pathologists of this clinic, tell me this is very frequently the case after the use of the cautery where previous section showed cancer. I have had the opportunity to see cautery applied several times in the Mayo Clinic and follow up cases through observation and subsequent reports from the house staff.

Dr. W. E. Sistrunk, of the Mayo staff, who has made a thorough review recently of comparative methods of treatment of cancer, in a conversation last December, said that they were very much pleased with the cautery method and thought that it would be more generally used when its benefits became more widely known.

Percy claims that ninety per cent. of even very advanced cases are operable. The advanced cases treated had perhaps best be followed by massive doses of x-ray given by the Coolidge tube. The use of x-ray before application of heat is dangerous in massive cancer, for while it is destroying some cancer cells it

at the same time stimulates others. By the use of the Percy cautery, in applying heat as a preliminary measure to operation, many more cases can be successfully operated on, and I believe in a few years cancer of the uterus will be looked for and diagnosed early by the general practitioner, and patients will recognize the advantage of early operation in this condition as they now do in appendicitis. The surgeon in treating carcinoma of the uterus strives to save life, prolong life and to make life more bearable, more agreeable and more satisfactory to self and friends. A low primary mortality, a cure or long period of relief and short convalescence should be his aim. This, I think, can best be accomplished by the use of a low degree of heat applied with the Percy cautery and secondary hysterectomy when practicable. I realize that attempts to reach the final estimate of the value of any cure of cancer should extend over a period of at least five years, but the reports from others and my own observation, although limited, seem so good, that I feel justified in bringing this subject before our Society.

Statistics will be given when I have had sufficient cases extending over a period long enough to be of definite value. These remarks are given that we may have a discussion of the application of heat in uterine cancer as applied by the Percy cautery, which to me appears one of the greatest recent advances in treatment of uterine carcinoma, well worth further investigation, and warrants us assuming a more hopeful attitude in treating this disease.

Dr. Frankland said that we had had the pleasure of looking upon a real advance in the treatment of cancer of the uterus. The other methods heretofore in use have run all the way from entire neglect to the radical excision of everything in sight. But this method is based on a rational idea and seems to give hope of much amelioration of these otherwise hopeless cases. He had had the privilege of acting as coöperator in one of Dr. Rogers' cases, holding the gloved hand on the uterus during the application of the heat; this is a useful and, indeed, necessary guide to the determination of the amount of heat to be used. Very little intraabdominal disturbance is necessary. The palliation of distressing symptoms produced by this method is ample justification for it; when a creditable proportion of cures is added, the method acquires an importance hard to estimate.

Dr. Sullivan said that to anyone concerned with the care of gynecologic cases in the free wards of the hospitals the cancer problem is very acute. These cases among poor, ill-fed, poorly-housed persons are very numerous. At the Washington Asylum Hospital the proportion of cases of cancer of the uterus is exceptionally high. The patients usually come there in such a

condition that nothing could be undertaken except the palliation of their misery until Dr. Rogers introduced the use of the Percy cautery. This method offers something distinctly better than any other method heretofore in use; the application of the cautery cooks the cancer, but does not destroy sound tissue; it destroys infiltrating cells *in situ*. The Percy method offers two important advantages: (1) relief from infiltration; (2) relief from secondary infection. The Wertheim operation is always easier after the application of the cautery.

Dr. C. S. White said that we are indebted to Dr. Rogers for the exhibition of an apparatus with a future. Percy adopted the method on the basis of experimental work which showed that cancer tissues could not be successfully transplanted after heating to 113 F. The method was taken up, after its introduction by Percy, at the Mayo clinic. There it was the early practice to attempt to guide the application of heat by the use of thermometers, but the gloved hand on the uterus was found to be the best guide. The reports from the Mayo clinic are very encouraging; the method is used as a routine method in all cases of cancer of the uterus in the so-called second stage, in which there is a large crater, with involvement of bladder or rectum. The percentage of cures effected has not yet been made out. Dr. White had used the method in two cases: (1) a relatively early case, with confirmation of diagnosis by immediate frozen section; the Percy cautery was used, followed later by the Wertheim operation, which was easily and satisfactorily done. (2) In the second case, the cervix was fixed and crater-like; the Percy cautery was used, and there is now no evidence of cancer. It is, of course, too early to predict the ultimate result in these two cases. Delay for examination of tissue is fatal; the diagnosis and treatment must be made at the same time.

Dr. Wm. P. Reeves was glad to hear the paper. He had been interested in one of the cases reported, having had her under his care at the Casualty Hospital; was also associated with the operation. Following the operation her mental condition became impaired, and it was necessary to transfer her to the Washington Asylum Hospital, where he observed her for two months. She made a gradual improvement both mentally and physically, and now appears to be in good health. He had under observation a similar case treated by radium at Dr. Howard Kelly's sanatorium. There is no comparison between the results of the two cases. The case under radium showed improvement for the first two or three treatments, then gradually became worse and died within a year after the treatment was begun. The Percy method is superior, in Dr. Reeves' opinion, to the radium treatment in this class of cases, and he believes it to be the most advanced treatment up to the present time.

Dr. Macatee inquired if there is any way to apply the method to cancer of the breast.

Dr. Rogers thanked the speakers for their remarks. The case referred to by Dr. Reeves was much improved and is now ready for the secondary operation. Dr. Rogers knew of no way by which the method could be applied to the treatment of cancer of the breast; he had seen a case in which a portion of a breast tumor had been removed by the Percy cautery blade. He had recently read a paper by Dr. J. Shelton Horsley, of Richmond, advising the use of the Percy cautery in treatment of some cases of cancer of the tongue.

In Memoriam.

DR. HENRY LOWRY EMELIUS JOHNSON.

Henry Lowry Emelius Johnson was born in Washington November 11, 1858; died December 21, 1915. H. L. E. Johnson attended school at the Columbian College. He afterwards studied medicine at the Medical Department of the same institution (now George Washington University), and received his degree of M. D. in 1882. He immediately began the practice of his profession in his native city and became actively identified, not only with his professional work, but with everything that pertained to the welfare of the community. For some years he was Professor of Gynecology in the Medical Department of the Columbian University. He was a member of the Medical Association of the District of Columbia, and was elected President in 1901. He was also a member of other local societies: The Medical Society of the District of Columbia, the Washington Obstetrical and Gynecological Society, and the Clinico-Pathological Society. He was Governor of the Society of Colonial Wars. He was connected with the George Washington and Emergency Hospitals. He was a member of the Chicago (Illinois) Medical Society and of the American Therapeutic Society. He was a member and trustee of the American Medical Association and represented that body as chairman of the Committee on National Legislation. He also held the following positions: Vice-President International Executive Committee Third Pan-American Congress; Vice-President First, Second and Third International Sanitary Conventions of the American Republics. He married Miss Eugenie Reel Taylor, of St. Louis, in 1901, who survives him.

On December 21, 1915, he attended a meeting of the Board of Directors of the Columbia Hospital, of which he was a member.

After the adjournment of the meeting he returned home and died suddenly on entering his house. During the last years of his life he suffered several attacks of angina pectoris, but kept up his work to the end and literally "died in harness."

WHEREAS, It has pleased Providence to remove Dr. H. L. E. Johnson from our midst,

Resolved, * That the Medical Society of the District of Columbia mourns his loss and offers sincere sympathy to his bereaved widow.

Signed) EDWARD E. MORSE,
B. L. HARDIN,
HENRY D. FRY,
Committee.

DR. THOMAS MILLER.

Dr. Thomas Miller, a member of this Society since April 7, 1897, died in this city November 30, 1915. Dr. Miller was born in Glasgow, Scotland, October 12, 1857. He came to this country in his early youth with his parents and settled in Maine, but afterwards removed to Michigan, where he attended the common schools and a business college at Adrian. In 1884 he graduated in medicine at the Howard Medical School, after which he practiced medicine in this city. He took a special course in ophthalmology at the Georgetown Medical School. From 1887 to 1891 he was Assistant Demonstrator of Anatomy and also lectured on Diseases of Children at the Howard Medical School. He was married in 1885 to Miss Esther Tefft, of Tecumseh, Michigan. They had one child, Dr. Thomas Miller, Junior, who graduated in medicine in 1914 at the George Washington Medical School, and was elected as a member of this Society January 6, 1915.

Your committee offers the following resolution:

The Medical Society herewith expresses its regret at the death of Dr. Thomas Miller and directs the Corresponding Secretary to send a copy of this resolution to his family.†

(Signed) NORMAN R. JENNER,
D. S. LAMB,
Committee.

DR. JOHN PATRICK DUNNIGAN.

John Patrick Dunnigan was born at Greenfield, Mass., November 29, 1875. After receiving his diploma from the high school of his native town he entered Holy Cross College, Worcester, Mass., from which institution he received the degree of Bachelor

* Adopted by the Medical Society February 2, 1916.
† Adopted by the Medical Society January 12, 1916.

of Arts. The degree of Doctor of Medicine was conferred on him by Georgetown University in 1901. He thereupon immediately began to further his study in a practical way by serving as resident physician at Providence Hospital.

His life was short, but in his few years he gained the respect and love of the community in which he lived and worked. A bright intellect, a Christian faith, sincerity of purpose and personal magnetism were the happy possessions with which God had blessed him. He was thus enabled to make and retain the friendships of all with whom he came in contact professionally, socially and otherwise.

As men think, death was untimely. Success had crowned his efforts. A happy home was his, and the devoted attention of family, professional associates and hundreds of friends must have made life alluring to him even in his moments of greatest pain. Here the Christian spoke, not once but again and again, "Thy will be done." Those who knew him best loved him most.

Resolved,* That in the death of Dr. John P. Dunnigan the Medical Society of the District of Columbia has lost a distinguished member, an efficient and capable physican and a loyal friend.

Resolved, That his manner of life, his fidelity to those who gave him their confidence, his love of home, patience and cheerfulness during his long illness, leave an example worthy of emulation.

Resolved, That this Society extends its deepest sympathy to his bereaved family, and that a copy of these resolutions be sent to them.

(Signed) HARRISON CROOK,
FRANCIS MCQUILLAN,
CHARLES R. LUCE,
Committee.

PROCEEDINGS OF THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA.

Stated Meeting, Wednesday, January 5, 1916.—The President, Dr. E. Y. Davidson, presided; about 55 members present.

The Treasurer presented his 43d annual report which was referred to the Executive Committee for audit.

The Chair announced the death of Dr. H. L. E. Johnson and appointed the following memorial committee: Drs. E. E. Morse, H. D. Fry and B. L. Hardin.

The Chair also announced the appointment of the following committees to serve during the current year:

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* Adopted by the Medical Society February 9, 1916.

Committee of Censors.—Drs. P. S. Roy, A. W. Boswell, W. P. Reeves, A. R. Thomas and A. J. Carrico.

Committee on Program.—Drs. A. L. Hunt, J. B. Nichols, N. P. Barnes, J. J. Kaveney and C. S. White.

Committee on Publication.—Drs. D. S. Lamb, H. H. Donnally, F. W. Braden, W. B. Carr and H. C. Macatee.

Historical Committee.—Drs. D. S. Lamb, E. F. King, G. Wythe Cook, J. F. Moran and L. Eliot.

Dr. G. Wythe Cook, for the Executive Committee, reported the following recommendations :

(1) That it be noted on galley proof of articles appearing in the WASHINGTON MEDICAL ANNALS that the cost of alterations in proof, except typographical errors, shall be borne by the authors.

(2) That a special committee be appointed by the President to take under consideration the subject of a meeting place for the Society.

(3) That all committees except the standing committees and the Historical Committee be discontinued.

(4) That the annual assessment for dues be $5.00 (five dollars).

(5) That Dr. W. W. Christmas be restored to membership upon payment of dues in full.

(6) That Article 5, Section 11, of the Constitution be amended by adding at the end of the section :

"That members so dropped may be reinstated by the Society upon the payment of arrears in dues."

Recommendations Nos. 4 and 6 were offered by the committee as proposed amendments to the Constitution.

Dr. Cook also reported that the committee had organized by the election of G. Wythe Cook, chairman; Frank Leech, vice chairman, and A. L. Hunt, secretary.

The Chair directed that recommendations Nos. 4 and 6 take the usual course of amendments to the Constitution. The other recommendations were adopted.

The Treasurer reported the names of members in arrears for dues for two years. The dues of Dr. Dwight G. Smith were remitted to date on account of his illness, and the dues of Dr. Henderson Suter were remitted during the continuation of his illness.

The Corresponding Secretary stated that it had been the custom to hold each year a joint meeting with the Association for the Prevention of Tuberculosis ; he had arranged to hold this joint meeting January 19, and as it had been suggested that the occasion would be appropriate to honor the memory of General Sternberg, he moved that the meeting be designated as a memorial to this distinguished man and honorary member. So ordered.

Dr. C. L. Waters, for the Committee of Censors, stated that the committee had been unable to complete a report on the applications for membership submitted at the November meeting and

asked that the consideration of these applications be deferred for two weeks. It was ordered that the election of candidates for membership be held at the meeting of January 26, and that when the stated meeting adjourned it be to meet for the purpose and on the date stated.

The following applications for membership were referred to the Committee of Censors :

For active membership : Daniel Lee High, George Washington University, 1907 ; Amy Jean Rule, Woman's Medical College, Pennsylvania, 1908 ; William Francis O'Donnell, Georgetown University, 1913 ; Charles L. Dugan, the same, 1912 ; Thomas Madden Foley, George Washington University, 1905.

For associate membership : Robert Ernest Noble, Major, Medical Corps, U. S. Army.

Also, the following nominations for honorary membership : Admiral Wm. C. Braisted, Surgeon General, U. S. Navy ; Dr. Rupert Blue, Surgeon General, U. S. Public Health Service.

A communication from the Health Officer was read requesting an examination by the Society of the regulations for the prevention of certain contagious diseases, promulgated by the Commissioners April 5, 1907, and such recommendation of changes in these regulations as might appear to the Society to be expedient. The President was directed to appoint a committee to take this matter under consideration and to report conclusions to the Society.

Dr. R. S. Lamb reported the following cases, and presented the patients : (1) Malignant ocular tumor. Enucleation and post-operative x-ray treatment. (2) Epithelioma of upper lid with x-ray treatment. Discussed by Drs. Henning, Dufour, Groover, Polkinhorn, Pfender, Hazen and R. S. Lamb.

Dr. Tom A. Williams reported a case of tumor of the pituitary body cured by x-ray. The patient was presented. Discussed by Dr. W. T. Davis, who exhibited charts to show changes in the visual fields, Dr. Groover, who exhibited skiagraphs of the skull of the patient, and Drs. Roy, Dufour, Selby, R. S. Lamb, R. A. Hooe, Reede and Williams. See page 103.

Wednesday, January 12.—The President, Dr. Davidson, presided ; about 65 members present.

The Chair announced the appointment of the following committees :

On Regulations for the Control of Contagious Diseases, Drs. Frank Leech, chairman ; H. H. Donnally, S. S. Adams, W. C. Woodward, N. P. Barnes, Jos. S. Wall and L. B. T. Johnson.

On Meeting Place for the Society, Drs. G. Wythe Cook, chairman ; A. B. Hooe, A. L. Hunt, A. R. Shands and J. D. Thomas.

Dr. D. S. Lamb, for a Memorial Committee, reported resolutions of respect to the memory of Dr. Thomas Miller, which were unanimously adopted. See page 141.

In compliance with a request of the Association of American Medical Colleges, Dr. W. C. Borden was designated to represent the Medical Society at the annual meeting of that Association in Chicago February 8.

A letter was read requesting the appointment of a committee to secure in the membership of the Society and otherwise new members for the American Red Cross, this committee to coöperate with similar committees from other local organizations. The Chair appointed Drs. L. H. Reichelderfer, L. B. T. Johnson and A. L. Hunt.

The resignation of Dr. W. F. Wagner was accepted.

The Treasurer reported the receipt of letter informing him of the illness of Dr. J. K. P. Gleeson and asking a temporary indulgence in the matter of his arrears of dues. Dr. Gleeson's dues were remitted to date and during the continuance of his illness.

Dr. Franzoni announced the election by acclamation to the presidency of his county medical society of Dr. F. C. Walsh, of San Antonio, Texas. Dr. Walsh is a member of this society, and a son of the late Dr. Ralph Walsh.

Dr. J. D. Thomas, by request, called attention to the following order of the Commissioners of the District of Columbia, dated May 2, 1913: "Members of the police department shall not consult physicians other than the police surgeons at any time unless they shall have first obtained permission from a police surgeon to that effect or shall have failed after due effort to secure the prompt attendance of a police surgeon." He moved the reference of this matter to the Executive Committee for consideration to determine whether this order unjustly curtails the personal liberty of members of the police department, and whether representations should be made to the Commissioners in order to secure the modification or repeal of the order in question. The matter was so referred.

A letter prepared by Mr. H. Ralph Burton, counsel for the Society, addressed to the Secretary of the Treasury, and setting forth a protest against the terms of Treasury decision 2,200 of the Commissioner of Internal Revenue, was read and ordered to be filed.

Dr. D. L. Borden reported two cases of End-to-end arterial anastomosis of radial artery following transfusion, and presented the patients. Discussed by Drs. Kerr, C. L. Davis, W. P. Carr, Rogers and Borden. See page 131.

Dr. S. S. Adams reported a case of Tumor of the kidney in a child 4 years of age, and presented the patient. Discussed by Dr. Selby, who exhibted a skiagram of the case, and Drs. Wolfe, Blackistone, Jack, R. A. Hooe, W. P. Carr and Adams.

Dr. Enrico Castelli read a paper entitled: The blood test in tuberculosis in relation to immunization and prophylaxis. Discussed by Drs. Ramsburgh, Tewksbury, W. P. Carr, Van Swearingen and Castelli.

Wednesday, January 19.—Joint meeting with the Association for the Prevention of Tuberculosis. Held as a memorial to the late Brig. Gen. Geo. M. Sternberg, U. S. A., retired. The President, Dr. Davidson, presided; about 100 persons present, members of both organizations.

The regular order was suspended and the President made suitable introductory remarks. See page 81.

Dr. George M. Kober, for the Memorial Committee, presented a report in the form of a historical resumé of the life and labors of General Sternberg. See page 81.

Dr. Macatee moved the adoption of the report and made remarks in appreciation of the character of Gen. Sternberg; the motion was seconded and the report was unanimously adopted. See page 91.

Dr. D. Olin Leech presented resolutions on behalf of both the Medical Society and the Association for the Prevention of Tuberculosis, testifying to the appreciation by his colleagues of the life and work of Gen. Sternberg, urging upon Congress a suitable recognition of his contributions to the public welfare; and expressing to Mrs. Sternberg sympathy in her bereavement. The resolutions were unanimously adopted. See page 92.

Mr. W. S. Ufford, Secretary of the Association for the Prevention of Tuberculosis, read letters regretting absence from the meeting from Dr. E. C. Schroeder and Gen. Nelson A. Miles, U. S. A., retired. See page 93.

Col. John VanR. Hoff, M. C., U. S. Army, on behalf of the Medical Corps of the Army, expressed appreciation of the occasion. See page 94.

Dr. S. S. Adams, Mr. W. H. Baldwin and Rev. D. E. Wiseman made remarks expressing their personal appreciation of the character of Gen. Sternberg. See page 94.

Dr. William C. Gwynn read a paper on The protection of the child from tuberculosis and kindred ills through an adequate system of school hygiene. See page 118.

Dr. Harvey W. Wiley spoke on How can we strengthen the hands of the Health Officer in the control of tuberculosis? See page 124.

Dr. W. C. Woodward discussed the two foregoing addresses. See page 126.

Wednesday, January 26.—Adjourned stated meeting; the President, Dr. Davidson, presided; about 100 members present.

The meeting was held to consider the report of the Committee of Censors upon applicants for membership proposed at the November stated meeting. The committee reported favorably and the following were elected:

To active membership: Albert Sidney Maddox, Bellevue Hospital Medical College, 1890; Enrico Castelli, University of

Bologna, Italy, 1898; Kate Breckinridge Bogle, Johns Hopkins University, 1914; Josiah Baker Henneberger, George Washington University, 1913; Charles Haddon Saunders, Georgetown University, 1912; Arturo Luis Guerra, the same, 1914; William Berry Marbury, University of Virginia, 1909; Helen D. Clarke Kempf, Johns Hopkins University, 1913; J. W. Mankin, College of Physicians and Surgeons, Baltimore, 1906.

To associate membership: Walter David Hunter, Bureau of Entomology, Department of Agriculture; Arthur M. Whaley, Captain, Medical Corps, U. S. Army; Archibald Magill Fauntleroy, Surgeon, U. S. Navy; Cary Travers Grayson, Passed Assistant Surgeon, U. S. Navy; A. W. Williams, Major, Medical Corps, U. S. Army.

The following applications for membership were referred to the Committee of Censors:

For active membership: Arthur Morris Zinkham, Georgetown University, 1912; Henry Louis Hayes, the same, 1890.

For associate membership: Frank Lester Pleadwell, Surgeon, U. S. Navy; Theodore Charles Lyster, Major, Medical Corps, U. S. Army.

The stated meeting was then adjourned and the regular meeting called to order.

The following appropriations were made: For printing stationery for Treasurer's office, $3.00; for publication of January number of the ANNALS, $153.34.

The Chair announced his participation on behalf of the Society in the work of a committee, headed by Dr. Rodman, President of the American Medical Association, which had made representations to the Secretary of War on preparedness from the medical point of view.

The Program Committee was authorized to invite Dr. Rodman to address the Society at a time agreeable to him and to the committee, and a committee was appointed to arrange for a smoker on the occasion of Dr. Rodman's visit.

A letter from Dr. L. B. Thomson was read, proposing a resolution instructing the Executive Committee to take under consideration the congestion resulting from street car traffic at 14th Street and Park Road, N. W., to determine whether physicians are unduly restricted in the use of the thoroughfare at this point, and whether the Public Utility Commission should be requested to relieve the situation. Referred to the Executive Committee.

A letter from the Baltimore County Medical Society proposing the holding of joint meetings with this Society was referred to the Program Committee for consideration.

Mr. Frederick A. Fenning of the local bar addressed the Society on the "Responsibility of the physician with respect to the insane patient." Discussed by Drs. W. A. White, Kober, Williams, Bullard, Hickling and Fenning. See page 106.

Wednesday, February 2, 1916.—The President, Dr. Davidson, presided; about 50 members present.

The Treasurer reported for January, receipts, $317.00; disbursed, $156.34.

The Chair announced the appointment of Dr. Ashby Frankland to the Committee on Publication, vice Dr. H. H. Donnally, resigned.

Dr. Frank Leech, for the Executive Committee, reported on the following matters:

(1) Consideration was given to Police Order, No. 26, referred to the committee by resolution Jan. 12; the committee agreed to the following resolution and recommended its adoption by the Society: "The committee believes that the Police Department is well within its rights, and does not deem it advisable to interfere with the promulgation of General Order, No. 26."

(2) That an honorarium of $200.00 be paid to Dr. D. S. Lamb, Editor of WASHINGTON MEDICAL ANNALS, and an honorarium of $100.00 be paid to the Treasurer, Dr. C. W. Franzoni; and that the payment of these honoraria in the amounts named be made an annual custom as long as the present incumbents remain in their respective offices. Recommended for adoption by the Society.

(3) Recommended that a committee to make arrangements for a suitable celebration of the centennial of the Society in Sept., 1917, be appointed, and that the Historical Committee be instructed to bring data relating to the Medical Association and to the Society up to date for use at the centennial.

(4) Recommended to lay on the table the resolution presented by Dr. L. B. Thomson looking to the amelioration of traffic congestion.

The recommendations of the Executive Committee were adopted.

Dr. H. D. Fry, for the Memorial Committee, submitted a report with resolutions in honor of the late Dr. H. L. E. Johnson, which were adopted. See page 140.

Dr. L. H. Reichelderfer, for the Committee on Red Cross Membership, made a partial report and asked members present to enroll.

Appropriations of $42.02 and of $4.18 were ordered to pay bills for services to the Corresponding Secretary's office.

Dr. Heitmuller offered the following resolution: "That the Executive Committee be requested to make proper representations to the District Commissioners and to the District Committees of Congress, urging them to increase the compensation of the medical employees of the District of Columbia, in conformity with the report of the Executive Committee to the Society at the meeting October 6, 1915." Adopted.

Dr. Hickling presented his annual report as alienist for the

District as germane to the subject of the resolution and asked that it be referred to the Executive Committee for consideration. So referred.

Dr. Williams presented a patient suffering with Paralysis agitans, with some unusual features. See page 97.

Dr. D. S. Lamb presented the following pathological specimens: (1) Healed round ulcer of the stomach; (2) Tuberculous ulcer of the stomach; (3) Post mortem perforation of stomach wall; (4) Skull of microcephalic idiot. See page 96.

Dr. W. J. Mallory reported a case of Gastric ulcer, a radiogram of which was shown by Dr. Selby, and Dr. W. C. Borden reported the surgical management, with post operative history. Discussed by Drs. Karpeles, Frankland, Sullivan, W. C. Borden and Mallory.

Dr. Jos. D. Rogers read a paper entitled: "Preliminary observations on the use of the Percy cautery in carcinoma of the uterus." Discussed by Drs. Frankland, Sullivan, C. S. White; Reeves, Macatee and Rogers. See page 132.

Wednesday, February 9.—The President, Dr. Davidson, presided; about 95 members present.

Dr. J. Lawn Thompson, Chairman of the Legislative Subcommittee of Executive Committee, reported that it had seemed incumbent on his committee to undertake to ascertain what could be done to secure the elimination from the Sheppard Prohibition Bill of the provision which prohibits the sale of alcohol by retail druggists; representations had been made to members of the Senate committee having the matter in hand setting forth how the provisions of the bill would restrict physicians in their legitimate duties. The suggestion was made that the control of the sale of alcohol could be secured by the use of measures in force governing the sale of narcotic drugs.

Dr. W. M. Barton presented an analysis of the pending bill, showing the effect it would have upon the work of physicians.

Dr. S. S. Adams moved that the Executive Committee be instructed to protest in the name of the Medical Society against the passage of the Sheppard bill as it now stands, and to offer such suggestions for the amendment of the bill as should protect physicians from interference with their professional rights. So ordered.

Dr. A. B. Hooe made a preliminary report for the Committee on Meeting Place and stated that the final report awaited the recovery of Dr. Cook, the chairman of the committee.

Memorial resolutions in honor of the late Dr. J. P. Dunnigan were unanimously adopted. See page 141.

Dr. P. S. Roy, for the Committee of Censors, asked the reference to the Executive Committee of the following proposed amendment to the Constitution: "Nominations for honorary membership shall be made by the Executive Committee and, after

consideration by the Committee of Censors, shall be reported to the Society and voted on in the same manner as prescribed for applicants for active membership. The number of honorary members shall be limited.'' So referred.

Dr. J. D. Thomas presented a case report and specimen of Aortic aneurysm. Discussed by Drs. Chappell, Frankland and Thomas,

Dr. C. N. Chipman reported a case of Post operative tetanus, with recovery. Discussed by Drs. Wolfe, Masterson, Frank Leech, Atkinson, Chappell, Randolph, Rogers and Chipman. See page 127.

Capt. M. A. Reasoner, M. C., U. S. Army, reported a case of Cerebral syphilis, with death 10½ months after primary sore; with intensive treatment. Discussed by Drs. Simpson, Hough, Hagner, Bogle and Reasoner.

WASHINGTON MEDICAL ANNALS.

Journal of the Medical Society of the District of Columbia.

Published Bimonthly by the Society, at No. 2114 Eighteenth Street, N. W., Washington, D. C. Subscription price, including postage, $1.00 per year, in advance. Single copies, 20 cents. Advertising rates given on application.

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Editorial.

History of the Medical Society of the District of Columbia.—Price $1.00, with 25 cents added if delivered in this city or sent by mail. Address Dr. C. W. Franzoni, 605 I Street, N. W. The books are in the custody of Dr. D. S. Lamb, at the Army Medical Museum.

The Washington Medical Annals, the official organ of the Medical Society of the District of Columbia, issued the first of January, March, May, July, September and November, will publish gratuitously such information of a medical, surgical and sanitary character, changes in personnel, &c., of hospitals, dispensaries, medical schools, medical societies and other medical agencies, as would be useful and interesting to the members of the Society. Address the Chairman of the Committee on Publication.

THE WASHINGTON MEDICAL ANNALS.—Back numbers.—Members of the Society who have back numbers of the ANNALS, and do not intend to preserve them, are requested to send them to the Chairman of the Publication Committee. Requests for such numbers are frequently received.

SPECIAL NOTICE.—The Medical Society, January 5th, to avoid the expense of unnecessary alterations in the proof sheets of the WASHINGTON MEDICAL ANNALS, ordered that alterations, except for typographical errors, should be at the expense of the authors.

Attention is especially invited to the necessity of members sending *promptly* to the Editor the discussions that they receive from the Recording Secretary, if they make any alterations in the discussions. Delay in this matter may prevent the alterations being printed.

ADVERTISEMENTS.—Attention is invited to the advertisements in this issue. All the advertisers are reliable and responsible. It is suggested that they be given preference.

The 550 members of the Society by a little effort could largely increase the number of advertisements. Dr. Frankland is the member of the Committee on Publication who has the charge of this matter.

THE OTHER MEDICAL SOCIETIES OF THE DISTRICT OF COLUMBIA.

CLINICAL SOCIETY.—Officers: F. L. Biscoe, President; W. J. Mallory, Vice President; E. P. Copeland, Secretary-Treasurer; Censors: L. A. Johnson and J. D. Thomas.

CLINICO-PATHOLOGICAL SOCIETY.—Active membership limited to 25. Inactive membership: those who have withdrawn from active membership after fifteen years. A limited honorary membership of eminent medical men. Meets on the first and third Tuesdays of the month from October to May, inclusive. Officers: President, G. Brown Miller; Vice Presidents, Loren Johnson and H. H. Kerr; Secretary and Treasurer, B. M. Randolph.

EMERGENCY HOSPITAL CLUB.—The club was organized early in 1915 by the members of the Staff of the Central Dispensary and Emergency Hospital. Meetings are held on the second Saturday of each month from September to May, inclusive; the officers are Ernest F. King, President; W. B. Carr, Vice President; D. W. Prentiss, Secretary and Treasurer.

FREEDMEN'S HOSPITAL MEDICAL SOCIETY.—Meets on the second Wednesday of each month from October to May, inclusive. Composed of physicians connected with the Staff of the Hospital

and the Medical Faculty of Howard Medical School. Collins Marshall, President; C. A. Brooks, Vice President; C. A. Allen, Secretary-Treasurer.

GALEN SOCIETY of the District of Columbia.—Wm. H. Littlepage, President; Harry A. Ong, Secretary.

GEORGETOWN CLINICAL SOCIETY; twenty-five active members, limited to graduates of the Medical Department of Georgetown University. Meets at the University Club on the third Tuesday in the month. John Foote, President; J. Russell Verbrycke, Jr., Treasurer.

GEORGETOWN UNIVERSITY MEDICAL SOCIETY.—Meets on the fourth Saturday of the month at the University Hospital. The membership consists of the Alumni, Faculty and Senior Students of the Medical School. J. A. Gannon, President; T. F. Lowe, Vice President; J. M. Moser, Secretary-Treasurer.

GEORGE WASHINGTON UNIVERSITY MEDICAL SOCIETY.—Organized 1905, membership limited to Alumni of School and Members of the Faculty. Meets in the Medical Building on the third Saturday of each month from October to May. President, E. P. Copeland; Vice President, W. H. Huntington; Treasurer, E. G. Seibert; Secretary, C. B. Conklin; President's Council, J. B. Nichols, W. W. Wilkinson, A. L. Hunt, J. Lawn Thompson, John Van Rensselaer. Active membership, 162.

HIPPOCRATES SOCIETY, membership limited to 25, with voluntary retired members after 10 years, meets on the second Thursday of the month from October to May. Officers for the year: J. R. Verbrycke, Jr., President; C. A. Simpson, Secretary.

MEDICAL HISTORY CLUB of Washington, D. C.—Officers: President, Frank Baker; Vice President, H. W. Lawson; Secretary, F. J. Stockman; Executive Committee, J. H. Bryan, Howard Hume, W. J. Mallory and the Officers. Members: Truman Abbe, Frank Baker, W. C. Borden, Joseph H. Bryan, G. Wythe Cook, John Foote, F. H. Garrison, Howard Hume, H. W. Lawson, W. J. Mallory, John B. Nichols, P. S. Roy, F. J. Stockman, I. S. Stone, John D. Thomas, Wm. A. White.

Program 1916.

Date.		*Essayist.*	*Host.*
March 25	"Joseph Leidy"	Dr. Garrison	Dr. Stockman, 1122 Girard Street.
April 26	"The History of Body-snatching	Dr. Baker.	Medical Society of the District of Columbia.

MEDICAL AND SURGICAL SOCIETY of the District of Columbia.—President, Wm. F. Sowers; Vice President, J. T. Kelley; Secretary and Treasurer, L. Eliot; Asst. Secretary, H. H. Kerr; Executive Council, John Dunlop, L. C. Ecker, H. G. Fuller, L. H. Reichelderfer and Eliot.

SOCIETY OF MEDICAL JURISPRUDENCE, Washington, D. C. —President, Wm. A. White; Secretary-Treasurer, D. P. Hickling. Meets on the second Monday of each month from October to June at University Club. Has from forty to fifty members.

SOCIETY OF OPHTHALMOLOGISTS AND OTOLOGISTS, Washington, D. C., meets the third Friday of each month from October until May, inclusive.

Officers: President, A. B. Bennett, Jr.; Vice President, A. H. Kimball; Secy.-Treasurer, Carl Henning, The Rochambeau.

Active members: A. B. Bennett, Jr., J. W. Burke, V. Dabney, W. T. Davis, L. S. Greene, C. M. Hammett, Carl Henning, E. B. Jones, A. H. Kimball, R. S. Lamb, F. B. Loring, O. A. M. McKimmie, W. B. Mason, M. E. Miller, Mead Moore, S. B. Muncaster, W. S. Newell, J. J. Richardson, E. G. Seibert, R. R. Walker, W. A. Wells.

Inactive members: J. H. Bryan, W. K. Butler, H. S. Dye, Wm. H. Fox, W. P. Malone, H. A. Polkinhorn, C. W. Richardson, D. K. Shute, W. H. Wilmer.

Schedule of Meetings—1916.

	Residence of:	*Paper on Eye by:*	*Paper on Ear or Throat by:*
March	Dr. Seibert	Dr. Newell	Dr. Richardson.
April	Dr. Hammett	Dr. Seibert	Dr. Jones.
May	Dr. Wells		Business meeting.

SOCIETY FOR MENTAL HYGIENE, DISTRICT OF COLUMBIA.—Organized at the New Willard June 3, 1915. Temporary President, Dr. Wm. A. White; temporary Secretary, Dr. D. P. Hickling. Organizing Committee: Surgeon General Rupert Blue, U. S. P. H. S., Miss Julia C. Lathrop, and Drs. White, Hickling and Frank Leech. The object of the Society is to work for the conservation of mental health, the prevention of mental disease and deficiency, and improvement in the care and treatment of those suffering from nervous and mental disease and mental deficiency.

SOCIETY OF SOCIAL HYGIENE, Washington, D. C.—President, Dr. Charles F. Stokes, U. S. Navy; Secretary, Lt. Col. J. R. Kean, U. S. Army, Surgeon General's Office. The Society has four committees, namely: Education, Venereal Diseases, Protection of Women and Children, and Psychopathology. Yearly dues, $1.00. Persons desiring to become members should address Col. Kean and state to which committee they wish to be assigned.

Therapeutic Society of the District of Columbia.—Meets at the G. W. School of Pharmacy, 808 I Street, N. W., on the first Saturday in each month. G. W. Latimer, President; A. P. Tibbets, Secretary.

Walter Reed Medical Society meets on the fourth Thursday of every other month, from September to May inclusive. Composed of physicians located in the eastern part of Washington. J. S. Arnold, President; H. R. Schreiber, Vice President; M. H. Prosperi, Secretary; N. E. Webb, Treasurer.

Washington Medical and Surgical Society.—President, N. D. Graham; Vice President, R. R. Walker; Secretary, Walter Van Sweringen; Treasurer, F. E. Gibson; Curator and Librarian, E. H. Egbert; Executive Committee: L. H. Taylor, Chairman, G. S. Clark, G. S. Barnhart; Program and Auditing Committee: Wm. A. Jack, Jr., Chairman, J. R. Nevitt, Walter Van Sweringen; Membership Committee: F. E. Gibson, Chairman, Wm. P. Reeves, Caryl Burbank.

Washington Obstetrical and Gynecological Society.—President, J. F. Moran; Vice Presidents, G. B. Miller, Prentiss Willson; Secretary, Truman Abbe; Treasurer, D. W. Prentiss. Retired members—G. N. Acker, S. S. Adams, E. A. Balloch, J. W. Bovée, W. S. Bowen, W. P. Carr, G. Wythe Cook, M. F. Cuthbert, H. D. Fry, J. T. Johnson, D. G. Lewis, A. R. Shands, E. E. Morse, Elmer Sothoron, J. Ford Thompson, John Van Rensselaer.

Washington Psychoanalytic Society.—Meets the second Saturday of each month, from October to May, inclusive. Officers: President, Edward J. Kempf; Vice President, Robert Sheehan, U. S. N.; Secretary and Treasurer, Mary O'Malley. Program Committee: Robert Sheehan, U. S. N., D. Percy Hickling and John E. Lind.

Washington Society of Nervous and Mental Diseases.—President, Wm. H. Hough; Vice President, Bernard Glueck; Secretary, J. J. Madigan. The Society has a limited membership of thirty, but welcomes Physicans and Surgeons interested in Neurology and Psychiatry. Meets monthly on the third Thursday at the Cosmos Club or a member's residence.

The Washington Surgical Society.—Meets at 1621 Conn. Ave. the third Friday of the month at 8 P. M. The officers are H. A. Fowler, President; D. W. Prentiss and Walter Webb, Vice Presidents; H. G. Fuller, Secretary, and J. A. Gannon, Treasurer. Members of Council, H. D. Fry, J. F. Moran and the officers.

WOMEN'S MEDICAL SOCIETY of the District of Columbia. —President, Sophie Nordhoff-Jung; Vice President, Emma Lootz Erving; Secretary and Treasurer, Martha M. B. Lyon; Corresponding Secretary, Mary Holmes.

THE SECRETARIES of the other Medical Societies of this District are reminded that the ANNALS will publish the schedules of their meetings.

AMENDMENTS TO THE CONSTITUTION AND BY-LAWS.—The following amendments have been made since the publication in Volume XII, March, 1913.

Constitution.—Article V, Section 4, adopted Nov. 4, 1914: before the words "Due notice" on page 142, insert "No application for membership that is rejected or withdrawn shall be renewed until after two years from the time of its rejection or withdrawal."

Section 10, same article; adopted Jan. 7, 1914: for "two years" substitute "one year." At the end of the section, add the words "Members so dropped may, after report by the Committee of Censors, be reinstated by the Society upon the payment of arrears in dues." Adopted March 1, 1916.

Article VI, Section 5, adopted Jan. 6, 1915: in the last line, for "two" substitute "three."

Article VIII, Section 2, page 148, 4th line from top: for the word "disorders" substitute the word "diseases."

Article IX, Section 2, first line, for the word "four" substitute "five." Adopted March 1, 1916.

By-Laws.—Article VIII, Section 9, page 153, adopted Jan. 7, 1914: No member of the Staff of any hospital receiving patients in private rooms shall attend such private patient sent to the hospital by a member of the Society, not a member of the Staff, unless specifically requested to do so by the attending physician.

Please note that the figures in Sections 7 and 8 of this article, instead of being 7 and 8 should be 5 and 6.

DR. T. A. WILLIAMS, 1705 N St., N. W., a committee on collecting instruments for Belgian physicians, will be glad to receive any instruments that members of the Society can spare, however old such instruments may be. Kindly send to Dr. Williams or notify him that you can contribute them.

GORGAS PRIZE MEDAL.—To be awarded yearly for the paper which shows the most important advances in medicine or surgery, on a medical or medico-military subject, preference being given to papers on medico-military subjects. Only for papers of exceptional value. Competition is open to medical officers of the Army, Medical Reserve Corps of the Army, and medical officers of the organized militia. The prize is given by the Association of the Medical Reserve Corps, U. S. Army, New York State Division. The Board of Award consists of three members

of the Faculty of the Army Medical School appointed by the Surgeon General of the Army. The papers to be submitted by March 31st of each year, to the President of the Board of Award, Gorgas Prize Medal, Army Medical School, Washington. The award to be announced at the graduation exercises of the School May 31st.

Fraternitas Medicorum.—The Medical Brotherhood for the Furtherance of International Morality. (See *Science*, August 6, 1915, page 179.) Every physician may become a member, man or woman; no fee required, but in order to maintain the organization, distribute literature, &c., voluntary contributions are welcome. President, Dr. S. J. Meltzer, Rockefeller Institute, New York City. The first Secretary is Dr. Wm. J. Gies, Columbia University, New York; Treasurer, Dr. Robert T. Morris, Post Graduate Medical School. There are a number of Councillors, all of them well known physicians. Also a large number of Honorary Presidents, of whom the following are Washingtonians: Surgeon General Gorgas; Dr. Alice Hamilton, of the Federal Bureau of Labor Statistics. Also an Advisory Committee, including Dr. Alsberg, of the Bureau of Chemistry, Dept. Agriculture, Dr. Anderson, late of the Hygienic Laboratory, and Dr. Garrison, of the Surgeon General's Library.

A committee of physicians and medical investigators request every physician to enroll as a member and declare his or her willingness to endorse and support the moral standard which the medical profession upholds when called on to perform its patriotic duties in an international strife. All communications should be addressed to Dr. Meltzer, 13 West 121st Street, New York City.

Post Mortem Examinations.—Examinations post mortem are often desired where, however, the facilities for making them are wanting. The funeral directors to some extent have provided such facilities at their establishments. Among the number the firm of Joseph Gawler's Sons has written to the Editor that it will afford the service to physicians, without charge either to the physician or family, and whether or not the firm is the funeral director. The necessary instruments are kept ready for use. In the absence of satisfactory arrangements otherwise, it is suggested that the offer of this firm be considered.

The American Association of Medical Jurisprudence will meet in Washington, D. C., on Saturday, May 6th, in The Gridiron Room of The New Willard Hotel. The program will be announced at a later date.

Dr. Wm. A. Woodward has been appointed Chairman of the Committee of Arrangements. Dr. D. P. Hickling is President of the Association.

THE PUBLIC HEALTH SERVICE from time to time publishes for general distribution leaflets on various health subjects. Among these is one on trachoma. The leaflet says that the Service has established five trachoma hospitals in Kentucky, Virginia and West Virginia, and treated in 1915 12,000 cases of the disease, of which the majority were cured and most of the remainder were benefitted. The Service also sent physicians and nurses among the people to instruct them especially how to prevent contraction of the disease. Lectures and clinics were held before medical societies.

The Service also published a leaflet on Alcohol and Pneumonia, stating that alcohol "is the most efficient ally of pneumonia," a disease which causes ten per cent. of all deaths in the United States.

Another leaflet calls attention to malaria, which is said to prevail more than is suspected. For instance, in the Yazoo valley 40 per cent. of the inhabitants are affected with the disease. The prevalence in some places has been reduced from 15 to 4 or 5 per cent. in a year by proper efforts. Inquiry has brought the Service to the conclusion that the musquitoes ordinarily do not carry the germs of the disease through the winter, and therefore if human carriers would be treated with quinine in the spring time, before the middle of May, the infection would not be acquired by other persons. But of course the breeding places must be eradicated by methods now well known, as drainage, grading, oiling, stocking with minnows, &c. Screening, of course, must be practiced.

Another leaflet is on typhoid fever in rural communities. The Service found on investigation that more than 50 per cent. of the people in these communities were using water from polluted sources. As a result of the adoption of corrective measures the typhoid fever rate has been much reduced; for instance, in one county in West Virginia, from 249 to 40 in one year; and in a county in North Carolina from 59 to 17.

Another states that 4 per cent. of the inhabitants of certain sections of the South have malaria. The officers of the Service have found that the tin can with rain water in it is a prolific breeding place for the malarial musquito. Measles kills over 11,000 American children every year. There has not been a single case of yellow fever in the United States since 1905.

Also a bulletin (No. 75) on the treatment of Leprosy with Chalmoogra oil, and carbon dioxide serum.

ALIENISTS AND NEUROLOGISTS.—The annual meeting will be held at the La Salle Hotel, Chicago, June 19 to 23, 1916, under the auspices of the Chicago Medical Society.

DR. ALLEN WALKER of this Society died February 21, 1916, and Dr. E. C. C. Winter March 20. Appropriate action will be taken by the Society.

Dr. Benjamin M. Beall late of this Society died March 1, 1916, at his residence at 417 H street, northeast. Dr. Beall was born April 17, 1854, in this District. Graduated M. D. at Georgetown Medical School in 1873. Joined the Medical Society Oct. 6, 1874, but was dropped from membership in 1878. Joined the Medical Association Oct. 29, 1873, was afterwards dropped, but was reinstated Oct. 6, 1891, and came again into the Medical Society by the amalgamation. Married Blanche T. Jerrell, who survives him. His name was dropped from the roll of the Society Nov. 5, 1913.

Dr. Joseph Aloysius Mudd, who died of acute dilatation of the heart January 21, 1916, at his home in Hyattsville, Md., was at one time a member of this Society. He was born Sept. 10, 1842, at Millwood, Mo. During the Civil War he served as assistant surgeon in the provisional army of the C. S. A. He graduated as M. D. in 1864 at the University of Maryland. He joined the Medical Society Sept. 27, 1865. About 1866 he removed to St. Charles, Mo., and later to Hyattsville, where he practiced until 1896. He joined the Medical Association of this District April 3, 1894, but, ceasing to practice, resigned October 6, 1896. It is said that he wrote a book on the medical service of the Confederate Army.

Dr. Edward J. Collins, graduate 1892 Medical Department Columbian University, age 66, member of Board of Eclectic Examiners of this city since 1897, died January 16, from endocarditis.

Mr. Henry Hurtt, father of Dr. Harry Hurtt, of this Society, died January 24, age 71 years.

Dr. Benjamin Franklin Gibbs, graduate of the Hahnemann Medical College, Philadelphia, in 1885, age 57, one of the founders of the Northern Dispensary and Emergency Hospital in this city, died January 15, from chronic parenchymatous nephritis.

Dr. H. L. Elsner, of Syracuse, N. Y., who had been in this city some time and attended meetings of this Society and took part in discussion, died suddenly, February 17, from what was termed a severe cold.

Dr. J. B. Gregg Custis, age 60, a graduate in 1878 of the New York Homoeopathic Medical College, for a long time President of the Board of Medical Supervisors of this city, and some time President of the American Institute of Homoeopathy, died November 2, 1915, from hematemesis.

Some Special Committees of the Society:

On First Aid Conference.—Drs. C. S. White, H. H. Kerr and W. P. Reeves.

On National Legislative Committee.—Dr. L. B. T. Johnson.

On Regulation for Control of Contagious Diseases.—Drs. Frank Leech, H. H. Donnally, S. S. Adams, W. C. Woodward, N. P. Barnes, J. S. Wall and L. B. T. Johnson.

On Meeting Place of Society.—Drs. G. Wythe Cook, A. B. Hooe, A. L. Hunt, A. R. Shands and J. D. Thomas.

On American Red Cross.—Drs. L. H. Reichelderfer, L. B. T. Johnson and A. L. Hunt.

At the Last Meeting of the National Board of First Aid Standardization in Washington, a resolution was passed requesting the committees to make their report to the Secretary of the American First Aid Conference, who will forward such reports to the Board of Standardization. The Board of Standardization recently appointed by the President of the United States is as follows:

Dr. Richard H. Harte, Philadelphia, Chairman, representing the American Surgical Association.

Asst. Surgeon General W. C. Rucker, Secretary, representing the U. S. Public Health Service.

Dr. J. Shelton Horsely, Richmond, Va., representing the American Medical Association (Surg. Sect.).

Dr. Samuel C. Plummer, Chicago, Ill., representing the American Association of Railway Surgeons.

Dr. John P. Kaster, Topeka, Kansas, representing the Association of Railway Chief Surgeons.

Major Robert U. Patterson, Medical Corps, U. S. A., representing the War Department and the American Red Cross.

Surgeon A. M. Fauntleroy, U. S. Naval Medical School, representing the Navy Department.

Colonel Louis A. LaGarde, U. S. A., Retired, representing the War Department.

The First Aid Committee of the Medical Society of the District of Columbia constists of Drs. Charles S. White, William P. Reeves and H. H. Kerr.

Prize.—The DeRoaldes prize, a gold medal, valued at $100, is open to regular practitioners in the United States and Canada who are not members of the American Laryngological Association. The object is to encourage the advancement of laryngology and rhinology. Essays should be in the hands of Dr. Harmon Smith, 44 West 49th Street, New York City, April 20, 1916.

The College of Physicians and Surgeons, New York City, announces that a dental school has been organized in connection with the Medical School.

Instructive Visiting Nurse Society.—The Advisory Board of this Society, which is located at 2506 K St., N. W., has

issued a circular setting forth the work of the Society, and inviting the coöperation of physicians. As each physician in this city has probably received a copy of this circular, it is not necessary to be reprinted. If not, any member of the Advisory Board, which consists of Drs. S. S. Adams, J. F. Mitchell, Ada R. Thomas, W. H. Wilmer and W. C. Woodward, may be addressed.

TUBERCULOSIS.—A bill (H. R. 83,520) has been introduced into the House of Representatives by Hon. Wm. Kent, of California, to standardize the treatment of tuberculosis in the United States and providing Federal aid in caring for indigent tuberculous persons.

COLUMBIA UNIVERSITY COLLEGE OF PHYSICIANS AND SURGEONS, 457 West 59th Street, New York.—A course of six lectures on "Military administration, medicine and surgery" will be given at the College of Physicans and Surgeons on Tuesdays, at 5 P. M., beginning March 28th.

The lectures will be given by Major J. H. Ford, M. C., U. S. A.; Major S. H. Wadhams, M. C., U. S. A.; Captain, P W. Huntington, M. C., U. S. A., and Lieut. Col. W. S. Terriberry, M. C., N. G., N. Y.

The lectures will be open to the general medical public as well to the students of the College of Physicians and Surgeons.—S. W. LAMBERT, Dean.

REVIEWS.

DISEASES OF THE SKIN.—By Dr. H. H. HAZEN; an attractively bound book of 525 pages and 238 illustrations. Published by C. V. MOSBY COMPANY, of St. Louis, Mo.

The good work of Drs. Hazen and Gilchrist, as well as other excellent dermatologists, is well portrayed in this splendid handbook which should become popular in time. As a text book it will require ripe age and maturity to compete with such works as Ormsby, Stelwagon and Crocker. As to be expected in a work of this size there is nothing original, an example of which is to be seen in the long and often repeated description of the Finsen light, space that could much better have been taken by the more useful and modern and less cumbersome Kromayer lamp. Again this is seen where dermatitis exfoliativa neonatorum (Ritter's disease) and pemphigus neonatorum are described as entities instead of unusual infantile forms of impetigo, yet in the general classification of these two lesions Dr. Hazen shows more judgment than some other authors. Dermatologists who have worked in the Austrian clinics, the origin of Ritter's disease, wonder why Americans have been so long in recognizing the true impetiginous nature of this lesion. The infectious origin and nature of the

disease was known from the first, while Hedinger and not Hazen demonstrated the etiological organism ten years ago. Knowing the infectiousness of the condition, some attention should have been called to the necessity of its isolation in obstetrical and baby wards, which was neglected. Again in the section on Roentgen therapeutics the author speaks of an epilating dose as 3 Holzknechts units which is naturally misleading and incorrect. This splendidly written hand book, too small and concise for a work of reference, gives too many of its valuable pages to skin pathology, a subject about which dermatologists themselves are at sixes and sevens. Most of the photographs are excellent. Those of annular and discoid syphilides so often seen in the negro are only surpassed by those published by Howard Fox which were obtained in a Washington clinic. Dr. Hazen has made the most of the clinical material that a small, clean city like Washington supplies. Viewing the book from cover to cover one must congratulate the author on his successful efforts in producing a work which would be a credit to a veteran dermatologist.—C. AUGUSTUS SIMPSON.

REPORT ON THE MEDICO-MILITARY ASPECTS OF THE EUROPEAN WAR.—From observations taken behind the allied armies in France. By SURGEON A. M. FAUNTLEROY, U. S. Navy, Instructor in Surgery, United States Naval Medical School. Under the direction of the Bureau of Medicine and Surgery. NAVY DEPARTMENT, WASHINGTON, D. C. Printed at Government Printing Office, Washington, D. C. 1915.

To describe the contents of this work would necessitate almost a reproduction of the book. The first part of the report deals with the different phases of the war as exemplified in the German advance, retreat and entrenchment, as having a direct bearing on the problems that had to be solved as they arose, by the medical officers of the allied armies. During the early part of the invasion by the Germans in Belgium and French territory the armies' advances and retreats were so frequent that it made the allied surgical field work an extremely arduous task, an almost impossible undertaking. Scarcely would the surgeons group to succor the wounded, as a regimental stand was made, before the order would be given to fall back, and ofttimes it would necessitate leaving many of the wounded on the field to fall in the hands of the enemy. A chapter is devoted to the outline of the organization of the fighting units, which needs no comment on my part, as it deals entirely with the military movements. The book is profusely illustrated. The plates show the various firearms, projectiles and other wound-inflicting agencies; the mode employed for transportation of the sick and wounded; whereas a large number depict the horrible mutilations in some of them. There are also severa interesting reproductions of x-ray plates. A graphic description is given of the base hospitals, their work and management. The

information gathered in this small volume is of vital importance to the medical world as it embraces much work and many achievements of the military surgeons of which there is no account in previous wars. Dr. Fauntleroy is to be congratulated on his keen observations and the graphic and concise descriptions given in this work.—F. W. BRADEN.

RECENT PUBLICATIONS OF PHYSICIANS IN THE DISTRICT OF COLUMBIA.

G. N. Acker; Some present-day problems in pediatrics; *Trans. Amer. Ped. Soc.,* vol. xxvii, 1915, page 9.

W. H. Arthur, U. S. A.; Postgraduate instruction at Army Medical School; *Mil. Surg.,* February.

Rupert Blue, P. H. S.; Sanitary preparedness; *South. Med. Jour.,* January; abstracted in *Jour. A. M. A.,* Dec. 11, 2118.

J. G. B. Bulloch; The lineage book of the Order of Washington; Washington, 1915; abstracted in *West. Med. Times,* March, 437. Also, Shall we abandon the use of whiskey in our practice; *Ibid.,* 425.

H. H. Bunzell; Mode of action of oxidases and relative oxidase activity of different organs of the same plant; *Jour. Biol. Chem.,* Baltimore.

C. S. Butler and W. F. Landon, U. S. N.; Technic for absorption test for syphilis using complement; U. S. Naval Med. Bull., January; abstracted in *Jour. A. M. A.,* Jan. 29, 385.

G. W. Cabaniss; The Medical Profession and its relation to the general public; *Jour. Nat. Med. Assn.,* January–March, 26.

R. H. Creel, F. M. Faget and W. D. Wrightson, P. H. S.; Hydrocyanic acid gas, its practical use as a routine fumigant; Reprint 313 from Pub. Hlth. Reports, Dec. 3, 1915.

V. Dabney; True myxoma of rhinopharynx, report of two cases; *Ann. Otology,* &c., September. Also in *Va. Med. Semi-Mo.,* March 10, 594.

J. Dunlop; Case of deposit in supraspinatus muscle simulating subacromial bursitis; *Amer. Jour. Orthop. Surg.,* February; abstracted in *Amer. Jour. Surg.,* March, 100.

H. E. Dunne; Diseases of the rectum; *Maryland Med. Jour.,* March, 53.

L. Eliot; Rectal disease as a cause of nervousness; *Va. Med. Semi-Mo.,* Feb. 11, 532.

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R. C. Holcombe; Has our propaganda for venereal prophylaxis failed; *Mil. Surg.*, January.

S. E. Jelliffe and W. A. White; Principles underlying the classification of diseases of the nervous system; *Jour. A. M. A.*, March 11, 781.

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L. A. La Garde, U. S. A.; Bacterial flora of infected gunshot wounds; *Mil. Surg.*, January.

M. W. Lyon, Jr.; A simple method for estimating the coagulation time of blood; *Jour. A. M. A.*, March 18, 891.

A. J. McLaughlin; Practical points in prevention of Asiatic

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W. J. Mallory; Diet in chronic nephritis; *Va. Med. Semi-Mo.*, Feb. 11, 525.

A. G. Mayer; Nerve conduction and other reactions in Cassiopea; *Amer. Jour. Physiol.*, February.

G. R. Miller; Diaphragmatic hernia; *Amer. Jour. Obstet.*, February.

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C. A. Pfender; Deep Roentgen therapy; *Va. Med. Semi-Mo.*, Feb. 25, 549.

C. C. Pierce and M. T. Clegg, P. H. S.; Strychnin sulphate, its effect on California Valley quail; Reprint 314 from Pub. Hlth. Reports, Dec. 10, 1915.

M. A. Reasoner, U. S. A.; Cure of syphilis; *N. Y. State Jour. Med.*, January.

J. S. Ruoff, P. H. S.; Pyorrhoea alveolaris; Reprint 320 from Pub. Hlth. Reports, Jan. 21.

W. Salant and C. W. Mitchell; Influence of heavy metals on isolated intestine; *Amer. Jour. Physiol.*, February; abstracted in *Jour. A. M. A.*, March 11, 838.

J. F. Siler, U. S. A.; Pellagra in Jamaica; *Amer. Jour. Trop. Dis.*, March.

E. F. Smith; Crown gall of plants and cancer; *Science*, March 10, 348, and *Jour. A. M. A.*, March 11, 833.

C. W. Stiles; Memory tests of school children; Reprint 316 Pub. Hlth. Reports, Dec. 24, 1915.

G. L. Streeter; Vascular drainage of endolymphatic sac and its topographical relation to transverse sinus in human embryo; *Amer. Jour. Anat.*, January.

R. Y. Sullivan; Case of fatal cerebral hemorrhage occurring in a new-born infant following breech delivery; *Va. Med. Semi-Mo.*, Jan. 21, 510.

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J. W. Trask, P. H. S.; The practicing physician; Reprint 319, Pub. Hlth. Reports, January 14.

G. H. Van Buren; Mortality statistics and the physician; *Amer. Jour. Pub. Hlth.,* December, 1915.

J. S. Wall; The status of the child in obstetric practice; *Jour. A. M. A.,* Jan. 22, 255.

M. I. Wilbert; Narcotic drugs; Reprint 321, Pub. Hlth. Reports, Jan. 21.

W. A. White; Danger of continuous bath; *Modern Hosp.,* January. Also in *Amer. Jour. Insan.,* January.

T. A. Williams; Misdiagnosis cases of compression of spinal cord; *West. Med. Times,* February, 383. Also, Medical treatment of exceptional children; *N. Y. Med. Jour.,* Jan. 8.

W. C. Woodward; Respiratory diseases as factors in causation of infant mortality; *Amer. Jour. Obstet.,* February.

PERSONAL NOTES.

Dr. C. L. Alsberg, of the Department of Agriculture, addressed the New York Section of the American Chemical Society, March 10, on the subject of "The Development of the Bureau of Chemistry."

Dr. J. F. Anderson, P. H. S., has been relieved from duty as Director of the Hygienic Laboratory and is succeeded by Dr. G. W. McCoy, P. H. S.

Dr. John S. Billings, son of the late Dr. John S. Billings, has been appointed Deputy Health Commissioner of New York City.

Dr. Harry Aloysius Bishop, of this Society, was married October 6, 1915, to Miss Roberta Morgan, at Fort H. G. Wright, N. Y.

Surgeon General Rupert Blue, P. H. S., has been reappointed by the President and confirmed by the Senate.

Drs. J. W. Bovée and W. P. Carr attended the meeting of the Southern Surgical and Gynecological Association at Cincinnati, Dec. 13 to 15, 1915, and took part in the discussions.

Dr. R. L. DeSaussure, P. H. S., has been transferred from the Hygienic Laboratory to the Marine Hospital, Baltimore.

Dr. Knox Emerson Miller, of this city, was married Oct. 29, 1915, to Miss Noxie Bliss Miller, of Berksville, Ky.

Dr. A. W. Freeman attended the meeting of the Southern Medical Association at Dallas, Texas, Nov. 8 to 11, 1915, dis-

cussed the subject of pellagra, and read a paper on "The small town, the neglected unit in sanitary administration."

Drs. Joseph Goldberger, P. H. S., J. F. Siler, U. S. A., W. J. McNeal, Carl Voegtlin, of the Hygienic Laboratory, and D. G. Willets, attended the meeting of the National Association for the Study of Pellagra at Columbia, S. C., Oct. 21 and 22, 1915, and discussed the subject. Dr. Willets read a paper on Treatment.

Dr. A. J. Huntoon, of this city, has been elected Department Commander of the G. A. R. of this District.

Dr. W. W. Keen, honorary member of this Society, has been elected President of the American Philosophical Society.

Dr. J. W. Kerr, P. H. S., presided at the Public Health Conference at Salt Lake City, Feb. 2.

Drs. L. A. LaGarde, U. S. A., P. S. Roy and T. A. Williams attended the meeting of the Medical Society of Virginia, at Richmond, Oct. 26 to 29, 1915.

Dr. J. P. Leake, P. H. S., has been ordered to duty at the Hygienic Laboratory.

Dr. Philip Newton was recently married to the Princess Shakofansky, of Petrograd, Russia.

Drs. Mary A. Parsons and Mary L. Strobel were elected Vice-Presidents at the meeting of the Association of Southern Medical Women, Nov. 10, at Dallas, Texas.

Dr. J. C. Perry, P. H. S., has been transferred to Ellis Island, N. Y. Harbor.

Dr. G. H. Schwimmer, of the Govt. Hospital for the Insane, and a member of the Staff since 1898, died at the hospital, Feb. 6.

Dr. H. M. Smith, Commissioner of Fisheries, was elected Honorary President of the Washington Aquarium Society, Jan. 21.

Dr. Edgar Thompson has been reëlected President of the North Capital and Eckington Citizens' Association.

Dr. F. C. Walsh, of this Society, and resident in San Antonio, Texas, was elected President of the Medical Society of Bexar County, Texas, Dec. 23, 1915.

Drs. M. I. Wilbert and C. L. Alsberg are members of the Council of Pharmacy and Chemistry of the A. M. A.

The Medical Society of the District of Columbia.

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Vol. XV. MAY, 1916. No. 3.

WASHINGTON MEDICAL ANNALS

CASE OF DYSTOCIA FOLLOWING VENTRAL SUSPENSION.*

By W. Sinclair Bowen, M. D.,

Washington, D. C.

March 3, 1915, I saw in consultation a patient with the following history:

Mrs. A———, white, 30 years of age, had had two normal labors, the last one eight years ago. Six years ago she was operated upon in Philadelphia for retroversion of the uterus; the operation was ventrosuspension and was performed by a man of experience and ability. In a letter from her doctor in Philadelphia he stated that in performing the operation he passed two small silk sutures through the peritoneum only, as his idea was simply to suspend the uterus and not to fix it.

When I saw the patient she had been in hard labor for a number of hours without making any progress. Her general condition was good; abdominal palpation revealed a vertex presentation, not engaged in the pelvic cavity but movable above the brim. Foetal heart sounds were normal; she was apparently at term.

Vaginal examination: The cervex could not be found anywhere near its normal position, but by inserting two fingers very deeply the middle finger would barely touch the anterior lip, which was on the level of or a little above the promontory of the sacrum. With each uterine contraction the child's head was forced against the posterior-uterine wall which had now become anterior and thinned by pressure. The fundus of the uterus was firmly adherent to the anterior abdominal wall just above the symphysis pubis.

Treatment: The abdomen was opened in the usual way for Caesarean section, the uterus was incised on its posterior wall, the baby and placenta delivered. After the uterine incision had been closed we cut through a thick band of dense adhesions about two inches long, which had united fundus uteri with the anterior adominal wall, thus allowing the fundus to rise to a higher point

* Reported to the Medical Society March 22, 1916.

and assume a more normal position. The raw surfaces were then covered over with peritoneum and the abdominal wound closed in the usual way.

After four weeks convalescence mother and baby left the hospital in good condition.

I would like very much to hear some expressions of opinions on the following points:

1. Was the course of procedure prescribed in this case the best, or would it have been better to have opened the abdomen, separated the uterus from the abdominal wall, closed the abdominal incision and allowed the delivery to take place through the natural passage?
2. Has ventrosuspension stood the test of time; is it as popular as in former years?
3. Does it often result in ventrofixation?
4. Should it ever be performed on child-bearing women?
5. If ventrofixation is followed by pregnancy, which progresses until full term, does it necessarily result in dystocia?

Dr. J. F. Moran said that this interesting case reminded him of several similar cases he had seen; one of them being with Dr. Bowen, in which a ventral fixation had been done, and the question arose as to whether the pregnancy should be terminated; the patient went on to term and was delivered naturally. In another case, it was supposed that a ventral suspension had been done, but Caesarean section was required because ventrofixation had resulted from the suspension operation. It is impossible to foresee what will actually happen after the ventral suspension operation, and it is therefore inadvisable during the child-bearing period. There could be no doubt that Dr. Bowen had chosen the proper course in performing Caesarean section in this case.

Dr. W. P. Carr expressed the opinion that Dr. Bowen had done the right thing in performing Caesarean section; it would have been barbarous to open the abdomen, free the adhesions, and then let the woman try to deliver herself. Caesarean section was much safer. We never know what we are going to do when we undertake to make intraabdominal adhesions; we may make very many more adhesions than we want, or we may fail to make any at all. Adhesions may occur when every effort is made to avoid them.

Dr. Prentiss Willson said, in regard to the suggested alternative of freeing the adhesions in this case and letting labor take its natural course, that even if the danger from shock and hemorrhage from the freed adhesions were disregarded, he doubted if the uterus could have been restored to its proper position for labor. Uterine growth had been very unequal in this case, nearly all the accommodating growth having been at the expense of the posterior wall. He had seen two similar cases; in one the suspension op-

eration had been done by Cullen, of Baltimore; the woman had had a stillbirth, and Dr. Willson saw her in her second pregnancy, which terminated by natural delivery, although it was perhaps more painful than it should have been. This was before the use of scopolamin-morphin analgesia. The second case he had seen with Dr. Stanton; the woman had had an interposition operation, and an attempt had been made to sterilize. Fixation of the uterus resulted, but sterilization did not; and a subsequent pregnancy had to be terminated by elective Caesarean section, the child surviving and the mother recovering satisfactorily.

Dr. Pagan said that there is much in the current medical literature to condemn the use of the ventro-suspension or ventro-fixation operation. The only merit this operation has, is that it is easy to perform; anyone can do it who has the courage to open the abdomen. It is obvious that in a case of ventro-suspension, and during a subsequent pregnancy, if abortion is not produced by the irritation and traction on the peritoneal ligament, it must elongate, and after delivery we have a long peritoneal band which lacks the power of involution and so the retro-displacement is almost certain to recur. What has the patient gained? She has risked an operation, abortion, dystocia, forceps or a Caesarean section, intestinal obstruction, and if she still lives, she has a recurrence. He made no mention of the added risks to the life of the foetus.

Dr. Bowen said that his reason for bringing up the question whether Caesarean section or the freeing of adhesions with subsequent natural labor were the best course to pursue in this case was that in a similar case another obstetrician had pursued the latter course, the result being very satisfactory. Dr. Bowen had thought at the time, however, that this management was an unnecessary hardship on the woman.

SOME OBSERVATIONS AND CONCLUSIONS OF THE DEPUTY CORONER.*

By W. B. Carr, M. D., Deputy Coroner,

Washington, D. C.

I am presenting this paper only after careful thought and consideration, not in the way of criticism but with the hope that it will stimulate discussion of the subject and thereby result in some good. I realize that the rôle of critic is easy to play and that many times the critic is incompetent, but I want to lay before you a few selected cases for your consideration, and to bring to your attention some impressions that they have made upon me rather than to criticise.

*Read before the Medical Society March 15, 1916.

It has been my good fortune within the past year or more to perform a considerable number of autopsies to ascertain the cause of death, and I could not have done this without having formed some decided opinions in a goodly number of these cases. Now some of them stand out so strongly in my memory that I feel that they should be presented to you along with the impressions they have made upon me. I will give a brief outline of a few of them, giving the history, as I was able to obtain it, the autopsy findings, and the treatment, if any, that I was able to discover had been given the patient, and I ask your careful consideration of these cases along with what I may suggest as a step in the direction to prevent such conditions in the future.

Case 1. A young colored woman was brought into one of our hospitals in this city, suffering from what seemed at first glance to be nothing more serious than a slight superficial stab wound of the left breast. The wound was dressed, the patient put to bed, and watched. For the first twelve or eighteen hours she seemed to be doing fairly well; after that time shock increased and she was decidedly a sick woman. Things went from bad to worse, and about thirty hours from the time that she was admitted to the hospital she died.

The autopsy revealed a stab wound of the heart, about one-half inch long, in the anterior wall of the left ventricle, but not penetrating the cavity of the ventricle at all. The wound in the pericardium was a little over one-half inch long, and a small artery had been severed. The pericardium was full of clotted blood, forming a covering over the heart an inch thick. The knife had passed just below the anterior edge of the left lung and there was no blood in the pleural cavity.

This case needs little comment, as it would seem that any average diagnostician should have made the correct diagnosis, and had that been done there would have been little or no choice in the treatment. I do not claim that operation would have saved this patient, but it would have given her some chance of recovery. I have seen several worse cases recover following operation. Then, too, the man who stabbed her would not have had to face a trial for murder.

Case 2. A young boy was brought into another hospital not so long ago, following an automobile accident, and it was discovered that he had a simple fracture of the femur, upper third, a dislocation of the sternal end of one clavicle, and a few minor lacerations and abrasions. This boy was put to bed, after having his leg put up in a splint, and was given the same careful watching as was case number 1, and with the same result; he came to the autopsy table.

The autopsy disclosed the before mentioned injuries and in addition a rupture of the liver, and at least three pints of blood in the abdominal cavity. The rupture of the liver was about

three inches long, and extended through from the under surface to the upper and anterior surface, just external to the gall-bladder. This boy was, of course, severely shocked at the time of admission to the hospital, but reacted a little, and the advisability of opening his abdomen was discussed and given up. Now I do not for a moment mean to say that operation would have saved his life, but it would have been good surgery. No other injury was found in the abdominal cavity and he would have been able to stand the shock of the operation all right, and would have had a chance for recovery.

Case 3. Young colored man, about 20 years old, admitted to one of our hospitals following an automobile accident, suffering from a simple fracture of one femur, upper third. It was put up in a splint and he did very well for about two weeks, but it was decided that the leg was not in good position and an open operation was done, and the leg put up in a splint running from the ankle to above the crest of the ilium. Right here I might say that I consider that a very poor way to treat any fracture. The next day I performed an autopsy to ascertain the cause of death.

The autopsy showed the wound of operation to be in good shape, and no pathological lesion was found to account for his death other than a slightly enlarged heart that showed acute dilatation of the right side. This death was due to surgical shock and was an unnecessary death, and had the proper surgical judgment been used I am sure that the man would have been alive today.

Case 4. Colored man, about 38 years old, admitted to one of our hospitals, as the result of being hurt in a fight. It was discovered that he had been hit over the head with some blunt instrument and that he had a good-sized lacerated wound of the scalp over the right parietal region and was suffering also from some concussion. The wound was dressed and he was put to bed and watched. He lived for five days and then died, after the same careful rest in bed that seems so popular at times.

The autopsy showed a depressed fracture of the skull, the depressed piece of bone being about one and one-half by two inches, and driven well into the cortex of the brain just posterior to the motor area on the right side. There was a subdural clot about three inches in diameter under the depression, caused by rupture of the middle meningeal artery.

Now this case should have most certainly been operated upon, and I do not see how such a condition escaped the notice of the surgeon in charge.

I may say here that I could give you a goodly number of similar cases, both where there was a depressed fracture overlooked and where there was no depression, but just a line of fracture and a large subdural hemorrhage under the same. I have also seen several cases where there was no fracture, but simply the sub-

dural hemorrhage following a blow on the head. None of these cases had received any treatment save rest in bed and the suturing of the lacerated wound that was present in some of them. Now I have been taught that such cases can be benefited by operation, and I have seen a good many get well following the proper operative treatment.

Case 5. Man brought in to one of our hospitals following an automobile accident, suffering severe contusions about the left side of the chest and suspected of having one or more ribs fractured. After dressing the few superficial wounds he had, his chest was strapped and he was put to bed. For about ten days he seemed to be doing very well, but after that his condition became unsatisfactory and he began to get in a critical condition. Three weeks from the date of the accident he came to autopsy and that examination showed that three of his ribs had been fractured and that they had punctured the pleural cavity on the left side. His left pleura was full of a thick green pus of a very foul odor that I think was due to pyocaneus infection. Most certainly this cavity should have been drained, and from what I have seen of such operations I feel that his chances would have been more than fair had this been done.

Case 6. Young white girl; had been treated for a long time for gastric trouble and had from time to time improved, but kept having recurrent attacks of pain and vomiting of blood-stained matter. Her last illness came on more severely than any of the former ones and lasted only two days.

The autopsy showed a perforated ulcer of the stomach on the lesser curvature near the pyloric end, and general peritonitis. Now this case needs no comment as to treatment, other than to say that it may have been hard to state the exact cause of her pain, but I feel that with her history of chronic stomach trouble and the acute nature of her last attack, at least enough was present to warrant an exploratory operation.

Case 7. A white man, about 36 years old, received a severe blow over the region of the bladder in a tussle and suffered severe pain for quite a time. He was examined and it was thought that he had received no severe injury. All that was done for him during the first day was rest in bed. By the third day his pain was intense and he was in pretty bad shape, with a tense abdomen and all the symptoms of general peritonitis. Stupes, etc., were used but no operation was done, and in five days he was dead.

The autopsy revealed a rupture of the bladder that would admit freely two fingers; the rupture was in the fundus of the bladder, and it is my impression that the catheter which was passed went into the abdominal cavity. His abdomen was full of urine and blood. This case should have been diagnosed and operated upon and would have held out a fair hope of recovery.

I could recite many more such cases that have come under my observation, but feel that I have given a sufficient number to show the grounds for my paper and for the conclusions that I have been forced to reach. I might say here that I will be only too glad to go over the reports of the coroner's office with any of you gentlemen who have that desire, and I think that I can show to your satisfaction that I have not in any way overdrawn the facts. I know full well that correct diagnosis is not always possible even with the best men, that even after most careful and complete examination we are rather often at a loss to account for the cause of the symptoms we find, that in some cases a lesion of great severity may fail to give rise to the symptoms we logically expect to find, and that we many times find abnormal reactions to shock or infection, due to what we may call the personal equation of the patient, and, of course, the above difficulties tend to throw the unwary off the right track.

In spite of these conditions I do feel that in the vast majority of cases, with the help of modern aids, such as laboratory examinations, x-ray, etc., we should at least be able to say that some surgical condition does exist in a certain part of the body and use that knowledge as the basis for an exploratory operation. When, as will sometimes be the case, we are in doubt as to the actual condition, and that doubt persists even when we re-assure ourselves that all is well, then I should most certainly advise an exploratory operation. This can be done in many cases under a local anesthetic or, if not, then under local anesthesia and gas, and the shock of the patient will be increased very little if at all. I am fully convinced that by the proper use of Crile's method we may safely explore cases that are in the doubtful class, and that under the old procedure of ether or chloroform could not have been operated upon without great danger.

Right here I would like to review a case that was admitted to the Emergency Hospital by me in 1908 that illustrates very well such a condition. A young colored man came to the hospital saying that he had been kicked in the abdomen by a mule about two hours before I saw him. I examined him very carefully and found that he had no pain in the region of the injury, no tenderness, no rigidity of the muscles of the abdomen, no elevation of temperature and no increase of pulse rate, and to all appearances he was not hurt in the least, but I thought it best to keep him in the hospital a day or so to be on the safe side. He was put to bed and an order given to take his pulse and temperature every two hours. Any rise of temperature or pulse or any vomiting was to be reported at once. No food was given. During the first twenty-four hours at least three leucocyte counts were made, all below 7,200. For at least thirty hours this man had not one symptom of any internal injury, but shortly after this he did regurgitate a little bile-stained fluid and his temperature rose to about

100 and his pulse to 110. On this evidence we at once opened him up and found a small perforation of the small intestine just under the site of the mule kick. It was closed, the abdomen drained and the man returned to bed. He promptly died. His vitality had evidently been so low as to prevent a normal reaction or else the infection had been of such severity as to overwhelm the man before reaction could set in. Prompt operation, while it might not have saved his life, would have been good surgery, and had there been no perforation the operation would not have hurt the man.

Not so long ago I saw another case that well illustrates the opposite side of the question. I was called in a great hurry to see a young lady suffering intense pain in the abdomen, in the region of the appendix. Examination showed great tenderness over the appendix; temperature 104.5 and pulse 120. The attack had come on suddenly and it looked very much like acute appendicitis, and had I not known that she was from a country where a great deal of tropical malaria is found, I would have felt safe in operating upon her at once. I had a leucocyte count made and also a blood smear examined for malaria. The count was 6,000 and the smear was positive for aestivo-autumnal malaria, and I found that my case was one of abdominal crisis. Without the blood work I would have undoubtedly operated upon her.

Now in my opinion head injuries should present no more difficulties than do those involving the abdomen, and yet I seem to see many such injuries that have received no further treatment than rest in bed.

Of course, we will see many cases, especially in accident surgery, where it will be impossible to make an accurate diagnosis at once and where our treatment must of necessity be expectant. We will also see cases where we will be sure of our diagnosis and yet where we will have to wait for some reaction to primary shock before we can operate in safety, and it is such cases as these that will tax to the limit the judgment of the best surgeons. I can look back on a goodly number of such cases, some required an operation and some did not, and I feel that each such case presents its own peculiar problem, and that we should not attempt to treat by routine, but by careful comparison with some similar case or cases in our past experience. Proper expectant treatment will always be difficult by reason of the fact that it will only be necessary in the doubtful cases and where we are waiting for reaction to primary shock in an effort to pick the best time for an operation and yet not wait too long, and it is this fact that I feel tends most to make accident surgery the most trying of all branches of surgery on the judgment of the surgeon.

I have made this statement before and repeat it with emphasis now, that the time has come when we must consider accident

surgery a specialty, or at least a branch of surgery requiring special study and experience for its proper performance. I am fully convinced that no field in surgery calls more strongly for good surgical judgment and a cool head, with the ability to reach the proper conclusion with no waste of time, than does this particular work. Now such judgment does not come to a man save by actual contact with and the treatment of a great number of such cases, and every good abdominal surgeon or orthopedic surgeon is not of necessity qualified to do this work. In fact, the field of surgery is so great that it would be impossible for one man to thoroughly master it all, and it is no reflection upon a man to say that he is not especially fitted to do work outside of his own specialty. Now it were impossible for all the men in this city, at present practicing surgery, to have had the experience necessary to make them expert in this line of work, and when a man not qualified by experience to care for such cases gets a case of this character he should think long and carefully before undertaking to treat it alone.

I can truthfully say that I have seen a goodly number of amputations following accident and injury to an extremity where I am positive that the limb could have been saved by properly guarded waiting, but I can also say that in each such case the surgeon in charge, while a good man along other lines, was without the necessary experience in accident work to give him really good judgment in such cases. It most certainly is not right to sacrifice such a limb in this way, and unless a man has had the proper experience he should not undertake such work. I do not think it is treating our patients fairly when, in many instances, they in their ignorance think one man as good as any other, if we assume responsibilites that we are not qualified to accept. I cannot but feel that some of us must, at times, consider the admission of the lack of knowledge along some special line as an admission of a lack of knowledge along all lines, and therefore hesitate to call in another man with special knowledge and experience to help. In many accident cases, calling in the proper man for consultation would be all that would be necessary, as his judgment and advice would put you on the right track and the patient would receive the benefit of what was his just due, good surgical treatment.

Now I feel that consultations are not frequent enough, especially in this accident work, and I urge strongly that we get more in the habit of asking expert advice from our brother practitioners qualified to give such advice. We will not in any case lose the confidence of our patient, but he will have a higher regard for our honesty in the matter and a strengthened determination to stick to us in time of trouble. In addition we would be protecting our own reputation in the event of a bad or unfavorable termination, and causing the family of the patient to feel that all

has been done for the loved one that was possible. What I am trying to lead to is discussion that may result eventually in the adoption of some method or measure that will tend to prevent the occurrence of such things as I see so frequently at the morgue, occasionally what seems to be bad surgery, but more frequently no surgery where an operation should have been done.

The American College of Surgeons was formed in an effort to raise the standard of surgery throughout the country generally, by accepting only such men as were qualified to do good work, and, as you know, they require that a man shall show to their satisfaction that he is a competent surgeon before they will accept him as a fellow. This college will no doubt accomplish much good, but it will not handle the local situation as I see it, for it will be some time before all the good surgeons in this city become members of this organization and, in fact, many good men may choose not to become members, yet they could not in fairness be classed along with a man who could not gain admittance if he so desired.

Some of our hospitals do all they can to keep up the standard of surgery by regulating the men they allow to operate, but this is a poor way of regulation and imposes an unfair burden on the hospitals. At present there is no way of controlling the activities of the incompetent man who may choose to operate in a private house or in a hospital that does not safeguard itself in the above manner, unless his results are so bad as to be the grounds for a suit for malpractice, and such a suit is almost impossible of proof.

Now I contend that this state of affairs is not right, and that some steps should be taken to regulate the activities of these men who apparently know not the first rudiments of real surgery yet have the effrontery to pose before their patients as men fully qualified to look after the most serious of surgical cases.

Under the law as at present enforced in the District of Columbia it is possible for a man to graduate from a medical school in June and take the District Board in July, and the passing of this Board confers upon him the right to practice both medicine and surgery in this District. I most certainly do not think that the average man in this stage of his medical career is in any way capable of the proper practice of surgery, and I am willing to admit that few such men do enter into the active practice of surgery; but there is no legal reason to prevent them from doing so should they so desire. Unfortunately some do see fit to consider themselves fully-fledged surgeons at this time and enter at once into the active practice of surgery, operating whenever and wherever they get the chance and in many instances with very disastrous results. Without in any way reflecting upon the men who see fit to confine their activities entirely to the general practice of medicine, I feel that I am right when I say that no man

can be a really good surgeon unless he is first a good general practitioner. The knowledge that will make him such comes not from a medical school but from the actual practice of medicine and in such manner only can he become the skilful diagnostician that he should be if he is to be a good surgeon. I feel, therefore, that it were only right that he make for himself a good foundation along these lines by several years of general work, and then, if he discovers that he is one of those men especially qualified to be a surgeon, that he give some evidence of such fitness before the Board before he be allowed to declare himself before all men a second Murphy, Mayo or Crile. I would have it borne in mind that most surgical mistakes either end fatally or in permanent injury, and that every time a poor man gets charge of a case, the patient not only has to suffer the consequences of bad judgment and bad surgery, but is deprived of any benefits good surgery might have conferred upon him.

There is just one more side or phase of this question that I would like to bring before you, and that is the attitude of the public, or at least some of the public, toward some of our profession and some of our hospitals. Such occurrences as I have tried to bring before you, in as becoming a manner as possible, do not tend to create the respect for our profession that it is justly entitled to, but rather do they tend to make the public look at us all with at least a questioning doubt at times. This most certainly should not be, for we all agree that to get the best results we must have the absolute confidence and trust of our patients, and, gentlemen, if we have that confidence we should merit it and safeguard it all the time or we will lose it. I believe that by reason of the office I hold at present I am probably in a position to hear more of this criticism of our noble profession than are many of you, and I must admit that at times I see good cause for such criticism, and I assure you that it has hurt me and has, in fact, prompted me to write this paper with the hope that it will be taken seriously and in the manner meant, and thus be the start of an effort to curb the activities of the comparatively few men who, either through ignorance or a lack of respect for our profession and the rights of others, are making us share with them the stigma that should be justly theirs alone. I believe my suggestions as to a remedy by making a change in the requirements of the Board of Medical Examiners are founded on logic, and I would thank you for a discussion either for or against my theory, as I think it is only by discussion and the exchange of ideas that we arrive at our best conclusions.

Now in conclusion I would like to say:

First. That from what I have seen in various and sundry hospitals in this city and elsewhere and have had impressed upon me by autopsy experience, there are many men in this city doing

surgery, or at least some surgery, who have not the qualifications to undertake such work.

Second. That more attention should be paid to accident surgery as a specialty than it would seem has been in the past. Especially should no man, unless well qualified by reason of long experience in this line of work, assume the responsibility for such operations as the amputation of a damaged limb following injury, without the advice of a competent surgeon along these lines.

Third. That when, after careful examination, we find ourselves unable to say with a great deal of certainty that an operative condition does not exist, it is best first to call in some experienced man as a consultant, and if then the doubt still exists we had far better subject the patient to an exploratory operation than to realize too late that an operative condition had been overlooked.

Fourth. That through what I believe to be a mistaken idea of what our patient may think of our ability, we are apt not to call a consultant as frequently as we should. This mistake will most certainly react to our undoing, but by calling the proper consultant we will not only be protecting ourselves but giving the patient the benefit of the best judgment and treatment that is to be had.

Fifth. That it would seem wise and proper for the medical examining board of the District of Columbia to consider some steps such as I have suggested in this paper with the idea of knowing, in a measure at least, the capabilities of a man before he be allowed to operate at any and all times upon the comparatively innocent public.

Dr. W. P. Carr said that we all agree that the internist should be examined before he is allowed to practice, and so he is; but when a man undertakes a specialty he should be given a special examination. Dr. Carr made no plea for consultations; indeed, he often found himself unable to help the judgment of the practitioner when called in consultation, and had sat all night by patients before deciding what the proper procedure should be. He had probably saved more patients by not operating than by operating. Consultation work of this character is poor pay at best, and the responsibility is very great. Judgment in accident cases is very difficult. Shock alone may simulate all sorts of grave internal injuries. Many cases of so-called brain concussion may in fact be small cerebral lacerations or large flat hemorrhages; such hemorrhages may remain for uncommonly long periods with no paralytic signs, and the differential diagnosis in such cases is very difficult. Too often accident cases are left too long in the care of inexperienced hospital internes; it is all right to leave them under such care, however, if the interne is properly supervised.

Dr. Tom A. Williams said that perhaps it was because the essayist is a young man that he had observed a sort of smiling

toleration of his remarks; but it must be remembered that it takes a young man often to see things, and therefore we should receive their judgments with respect. Dr. Williams wished to speak on two points: (1) The need of special tests of the qualifications of surgeons; and (2) the alleged reluctance of young men to seek consultations.

(1) In Europe no one can practice any specialty without a special extra examination conducted by the medical faculty of the state. In England no man can obtain a post on the surgical staff of a hospital unless he is a member of the Royal College of Surgeons, and this membership is obtained only by passing an exceedingly stiff examination. A physician in England can have no status as a consultant until he becomes a fellow of the Royal College of Physicians, and this also requires a stiff examination which can be taken only after five years of practice. Thus the public is protected from poseurs.

(2) As to the practitioners' reluctance to seek consultation: some men who are able to obtain a diploma and license never become good doctors; these are hopeless, they don't know when they need consultation. As to reluctance on the part of young men, his own experience has been that young men ask for consultation more often than the older men. The fear of having to surrender the care of a remunerative patient does at times deter physicians from seeking consultation.

The fact that a surgeon in his work can destroy makes him more dangerous than the unqualified physician, and therefore a special demonstration of fitness should perhaps be required of the surgeon.

Dr. A. A. Snyder recognized one of the cases reported in the paper as having been under his care; this was the boy who had been injured by an automobile and who died from internal hemorrhage as the result of rupture of the liver. There was no evidence whatever that the wheel had passed over the abdomen, nevertheless some abdominal injury had been carefully considered, but no evidence could be found; the other injuries were sufficient to account for the shock. The boy was very carefully watched, was fully examined, and it was not until hours after the accident that any symptoms of internal hemorrhage developed; it was then too late to intervene. He had reported this case to the Surgical Society, and his colleagues had expressed the opinion that, in view of the conditions present, it was perhaps better that no operation had been undertaken. Nevertheless, he still regrets that he had not opened the abdomen and attempted to close the liver rent. Dr. Snyder was pleased that Dr. Carr had reported the case because it gave the opportunity to present the clinical history and also showed that the Coroner should not be too drastic in his findings against the surgeon in apparently neglected cases.

As to the necessary qualifications for the young surgeon, it seemed to him that the most important qualification is a natural inborn aptitude; written examinations are no good to determine this question, except perhaps for theoretical knowledge. Practice is the thing that is needed; the young surgeon needs actually to get his hands in surgical work under the guidance of an experienced man. Many practical men make a poor showing on written examinations.

Dr. W. P. Carr had been working with Dr. Snyder for many years, and if he failed to make a diagnosis in the case cited the diagnosis could not be made. This boy had been adequately watched and examined, which is the main consideration. It is hoped that the American College of Surgeons will do for this country what the Royal College of Surgeons has done for England. Of course in the organization of that institution it was necessary to take in many men whose reputations were already secure, and these men very often nominated others in their communities; at times these nominations were ill advised and some incompetent men got in on the ground floor. From now on, however, a rigid entrance examination will be required, and this examination will be practical, including reports of at least 50 major operations. This method of special examinations should be extended to other specialties; why should not this Society distinguish itself by inaugurating a movement looking to this end? He suggested the appointment of a committee to consider the advisability of such a movement.

Dr. W. B. Carr feared the paper was susceptible to misunderstanding in some respects; he does not pose as a full-fledged surgeon himself, but always consults very freely and seeks experienced help when beyond his depth; so that he practiced what he preached in this respect. He had tried to report only such cases as had a definite history of surgical mismanagement, and had sought to avoid pointless criticism. The medical man cannot do the harm that the surgeon may do, because the surgeon can invade sound tissue and can abolish function. The surgeon needs special training. A written examination as a test of a surgeon's fitness is worthless; what ought to be required is that the young man spend sufficient time as the assistant of a capable surgeon before he undertakes independent surgical work.

Not a Good Idea.—A Friend—"If you love her, old fellow, why don't you marry her?"

Bachelor Doctor—"Marry her! Why, she is one of my best patients."

CASE OF FRACTURE OF THE ACETABULUM.*

By Daniel L. Borden, M. D.,

Washington, D. C.

M. G., male, white, single, age 27, occupation painter. On the night of September 25, 1915, fell down an open elevator shaft for a distance of twelve and a half feet, striking upon the left greater trochanter. Examination immediately afterwards revealed the following:

A man, five feet two inches in height, with bruise over left hip and abrasions on left knee and left hand. The left thigh was semiflexed, adducted and shortened about one and one-half inches. There was an absence of the prominence of the great trochanter. The thigh could be flexed, adducted and partly abducted. The x-ray findings by Dr. Selby showed the head of the femur forced through the acetabulum directly into the pelvic cavity.

Reduction was accomplished over the fluoroscopic table. The pelvis was fixed and, by means of lateral and downward traction, the fracture was reduced. After reduction the part could be maintained in correct position by downward traction. A Buck's extension was therefore applied for a period of forty-five days. Passive movement was begun on the sixth day and continued daily until patient was up and around. Within seventy days he was able to walk without assistance.

At present there is little or no shortening and he can walk or run, but still has a very slight limp.

CASE OF MASTOIDITIS, COMPLICATED BY PURULENT CEREBRO-SPINAL MENINGITIS. OPERATION AND RECOVERY.†

By W. H. Huntington, M. D.,

Washington, D. C.

A. W., age 8, female, white. Past history of no importance. History of head colds since the latter part of December, 1915 (with occasional earache), which were not severe and subsided without treatment.

January 21, 1916, the left ear began to pain intensely and temperature was 101; headache severe and child irritable. 22d, the child was brought to my office by the mother, who gave me

*Reported to the Medical Society February 23, 1916.
†Reported to the Medical Society March 8, 1916.

the above information. At that time examination showed a slightly red membrane in left ear, no bulging, and no perforation or discharge. There had never been any discharge from the ear. There was slight post-auricular pain and some pain in the angle under the ear. A free paracentesis was done which yielded no pus. Temperature, 100.5. 23d, the mother reported that the child was feeling better and was out playing. Temperature, normal.

Jan. 24th, the mother reported by telephone that the child's temperature was 102, headache intense, frequent vomiting, very irritable, and complaining of pain in back of neck.

I immediately went to see the patient and found her in bed, in an extremely exhausted condition, vomiting a greenish watery fluid, slightly delirious, knees drawn up, head drawn back, pupils dilated, marked nystagmus with quick component to the diseased side; Kernig's sign present. No eruption anywhere on body. Had had no chills. *Tache cérébrale* negative. No discharge from the ear. Some sagging of the superior meatal wall. Temperature, 102; pulse, 120. The mother was informed of the grave condition of the child. My diagnosis at that time was "latent mastoiditis with meningitis," and my hopes were that the meningitis was of the serous type.

The patient was immediately taken to the hospital, where I called Dr. McKimmie in consultation. He concurred with my findings and advised immediate operation. Nystagmus at that time was less marked, while the sagging meatal wall was more marked than when examined at her home. Post-auricular pain marked. Patient delirious, temperature 103, pulse 130.

The operation revealed a large amount of fluid pus in the cortical cells, antrum, tip, and deeper cells overlying the sinus wall. There was no macroscopic evidence of necrosis of the inner table.

Paracentesis was repeated. Lumbar puncture showed fluid under marked pressure and rather cloudy. I withdrew about 25 c.c., which was taken immediately to Dr. W. H. Hough for chemical, microscopical, and bacteriological examination. The report was as follows: Appearance, opaque; protein content, markedly increased; cells per cu. mm., 6,850; differential cell estimation, chiefly polymorphornuclear leucocytes; a few lymphocytes and endothelial cells; occasional macrophage and plasma cell. Fehling's solution not reduced. The only organism present was Friedlander's bacillus.

The morning after the operation the patient was slightly delirious, irritable, and complained of pain in head, back of neck and throat; knees constantly drawn up and flexor contractions were general. Some hyperesthesia of back. No nystagmus. On the afternoon of the 25th the patient was bright, temperature 99.8,

headache less marked. 26th, condition much improved, headache and pain in neck much less. Muscular contractions diminished.

From this day on the temperature remained normal, no complications ensued and the mastoid wound healed in less than eight weeks. Discharged on the 20th of March. The labyrinth on the left side is functionating perfectly at this time and there seem to be no abnormalities whatever as a result of the meningitis.

The case is of interest for several reasons:

Fortunately the child was seen in the early irritative stage and early operated on. I attribute the recovery to the fact that this was done, and also that a lumbar puncture was done. The latter, although done principally for diagnostic purpose, undoubtedly exerted a favorable influence upon the disease, and I feel certain that it was a large factor in the recovery.

Another point of interest was the fact that there never had been any discharge from the ear. This fact and the lack of other subjective and objective symptoms typical of mastoiditis, would make one hesitate to make that diagnosis.

The bacteriological work was done by Dr. Lester Neuman, and his report showing Friedlander's bacillus as the organism cultured from the spinal fluid, adds still another interesting feature, as this organism is rarely the cause of meningitis.

The intelligent observation of the child by its mother made it possible for an early diagnosis and operation. I wish to add to the plea made so often by the aurist for a close observation of children, by mothers and family physicians, when the usually neglected nasal and aural infections are in evidence. Attention to these cases will not only tend to the conservation of the special senses, but of life itself.

Dr. W. K. Butler congratulated Dr. Huntington on the outcome in this case, as well as upon the diagnosis of mastoid disease in the absence of a discharge. Dr. Butler cited another case of mastoiditis which had been operated upon by Dr. Huntington last fall; this child remained in Children's Hospital after the operation with a persistent fever, and in December last came into Dr. Butler's hands as a result of the customary rotation of service. In spite of thorough re-operation, the fever persisted until the child died of meningitis. No autopsy could be secured; he had had occasion to speak of this matter in a recent discussion here, and it seemed to him that the Board of Charities and the Coroner might provide some way by which autopsies could be made obligatory in the case of pauper patients who die in public hospitals; it seemed to Dr. Butler that the contributions to science to be gained in this way would not be too much a return to require for free hospital care.

Dr. Huntington thanked Dr. Butler for his remarks. The chief points of interest in the case reported were: (1) The presence of mastoiditis without ear discharge; (2) the fact that the child came under observation during the early stages of labyrinthitis; (3) the fact that recovery followed purulent meningitis. The watchful care of an intelligent mother was an important factor in the fortunate result. The case at Children's Hospital referred to by Dr. Butler was one of chronic otitis media; Dr. Huntington had contemplated doing a radical operation in that case, but the desire to conserve the child's hearing had deterred him. He probably had not removed all the pus-bearing cells. The appearance of the mastoid at the time of his operation had suggested the possibility of a luetic condition underlying the chronic process.

REPORT OF DR. L. B. T. JOHNSON, DELEGATE FROM THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA TO THE ANNUAL CONFERENCE ON MEDICAL EDUCATION, PUBLIC HEALTH AND MEDICAL LICENSURE.

At the Twelfth Annual Conference of the Council of Medical Education, the chairman reported that 51 out of 94 colleges now require two years of premedical work, four years in a medical college, and one year as hospital interne. He believes that the State Boards by more stringent requirements will eliminate about twenty more of the existing colleges. Medical education in this country has so improved that there are about a dozen colleges now which give better courses than can be found anywhere abroad. The chairman further stated that the good work done in eliminating unworthy colleges should be extended to hospitals which are now being graded, as was done in the case of colleges.

Dr. Colwell, the Secretary, stated that 50 or 60 colleges now in existence could easily take care of the 14,000 students now studying medicine. By analysis of the enrollment he discovers that the greatest percentage of increase is in those institutions which have adopted the two-year premedical requirement. He further reported that only six medical colleges were without endowment and depended entirely on the fees of students.

"The relation of the Laboratory courses to the work of the clinical years" was the subject of the first morning discussion. The apparent lack of relation between the first two years was deplored. The student was too often allowed to forget his laboratory sciences, because they were not properly applied by the

clinicians in the last two years. Many colleges, however, had made great advances along this line, and Dr. Victor Vaughan stated that in many colleges visited by him he found the clinical teachers applying the laboratory sciences directly in their teaching.

Dr. Barker felt that general principles should be taught in the first two years rather than a mass of detail. He further felt that a medical school should recognize that its graduates might become practitioners of medicine, teachers or research workers, and that the courses should be sufficiently elastic to permit of varied choices.

Dr. Billings, Dr. Barker and others felt that we were attempting to teach the students too much, and that not enough time was allowed them for independent work and recreation.

Dr. Lee, of Columbia University, felt that too little attention was given by clinicians to applied physiology, to remedy which Columbia was giving a post-graduate course on clinical physiology and intended to incorporate such a course in the senior year.

Dr. Councilman also felt that we were attempting to teach too much, with the result that the student knew nothing thoroughly. He thinks that the preclinical years should be devoted to training the student in the scientific methods of acquiring knowledge.

In the afternoon a symposium on "The National Board of Medical Examiners" was held and was discussed favorably by the three Surgeon-Generals, by Dr. Rodman and others. The idea briefly was to have a National Board of eminent men meet in Washington to give an exhaustive examination, and that the certificate issued should be accepted by any State Board without further examination. Several States found legal objections to such a plan. The Council in general approved the general plan, and will so report to the House of Delegates of the American Medical Association, from which body it was referred to the Council.

The tendency is increasing to discontinue our past attitude towards all forms of drugless healers, but to recognize, as is done in Ohio, the right of the individual to any form of treatment he may elect. But the State insists that any practitioner shall first demonstrate by examination that he is able to make a diagnosis of disease, implying a knowledge of biology, anatomy, physiology, chemistry, &c. In this way the State feels that it can best protect the citizen from uneducated and untrained practitioners, of any cult.

Dr. Chapin gave an exhaustive paper on "State Public Health Organization," as did Dr. Kerr, of the Public Health Service, on "Some essentials of Public Health Organization."

Dr. Chapin felt that all health work, including all forms of public health education, should center in the Health Department.

They both agreed that public health work was still in a developmental stage, which condition must continue from the very nature of the case.

METHODS OF PRESERVING RECORDS OF FRACTURES OF LONG BONES.

Adopted by the American Surgical Association, the Surgical Section of the American Medical Association, U. S. Army, U. S. Public Health Service, and Many Other Organizations.

Dr. G. T. Vaughan, March 8, made some remarks before the Medical Society on this subject and showed the following blanks. He suggested that every surgeon and physician use the blanks in keeping records of cases and send copies every six months after end of treatment, or whenever practicable. The blanks can be obtained from Dr. Vaughan, 1718 I Street, northwest, or Dr. Wm. L. Estes, South Bethlehem, Pa., to whom also the reports should be made. Dr. Vaughan believes that in this way much valuable data will be collected that will aid in the selection of the best methods of treatment.

American Surgical Association—Schedule of Fractures.

Humerus—
- a. Anatomical neck.
- b. Separated upper epiphysis (with or without fracture).
- c. Fracture of tuberosity.
- d. Fracture of surgical neck.
- e. Fracture of shaft.
- f. Supracondylar fracture.
- g. Internal condyle; external condyle; capitellum.

Radius—
- a. Head and neck.
- b. Shaft.
- c. Lower end (not Colles's).

Ulna—
- a. Olecranon.
- b. Shaft.
- c. Lower end.

Radius and ulna—
- a. Shafts of both bones.
- b. Colles's.

Femur—
- a. Neck, through the.
- b. Neck, base of the.
- c. Trochanteric.
- d. Upper third.
- e. Middle third.
- f. Lower third.
- g. Supracondylar.
- h. Involving knee joint.

Tibia—
- a. Involving knee joint.
- b. Shaft.
- c, Internal malleolus.

Fibula—
- a. Shaft.

Tibia and fibula—
- a. Shafts.
- b. Pott's.

General Results:	GOOD	MODERATE	BAD
Anatomical			
Functional			

AMERICAN SURGICAL ASSOCIATION.

INQUIRY FORM FOR FRACTURES.

1. Bone..... 2. Site—Neck.....Upper.....Middle.....Lower 3d.....Condyle.....Involving joint.....
.....
3. Name..... 4. Sex—M.....F..... 5. Age..... 6. Occupation.....
7. Time fracture occurred—Date.....Hour..... ..... 8. Hospital entered—Date..... ..... Hour.....
9. First treatment date.....Hour..... 10 Cuase of fracture.....
11. Kind of fracture—Oblique.....Transverse.....Spiral.....Impacted.....Comminuted.....Simple.....Compound.....
12. Was there serious injury to soft parts—Skin—Yes..... No..... Muscles—Yes..... No..... Vessels—Yes..... No..... Nerves—Yes..... No.....
13. Reduction: How many hours elapsed after accident before reduction?.....
14. Was anatomical reposition of fragments obtained? Yes.....No.....
15. Anaesthetics used: Yes.. ...No.....Ether.....Gas.....
16. Fixation: Closed Method.
    - Position, Hyperflexion.....full supination.....abduction
    - Splints.....
    - Plaster of Paris.....
    - Traction—Bucks..... Jones.....Hodgen..... Bardenheuer.....
    - Steinman.....
    - Amount of weight used.....
17. Open Method.
    - Was non-operative treatment tried first.....
    - How long after injury was operation performed.....
    - Was open reduction alone performed.....
    - What form of internal fixation used—Steel Plates.....Wire.....
    - Nails.....Screws.....Bone transplants.....
    - Was it later necessary to remove fixation materials.....
18. Shortening at first examination.....cm. When all apparatus removed.....cm. Date.....
    When discharged from hospital ..... cm. Date.....At last observation.....cm. Date.....
19. X-Ray—Yes....No....First finding on the.....day before;.....on the.....day after reduction. Fragments Displaced—Slightly.....Markedly.....
    Fair apposition—Yes.....No..... Anatomical—Yes.....No..... Overriding.....cm. Rotation—Yes.....No.....
    At last finding on the.....day Overriding.....cm. Apposition Fair—Yes.....No..... Anatomical—Yes.....No.....
20. How long confined in bed?.....How long in Hospital?.....
21. How long did patient use crutches?..... .....Cane?.....
22. Results: Final examinations made.....weeks.....months after injury. Union bony.....fibrous.....Non-union.....
23. Disability—Partial.....Complete .....Estimated by deformity.....Shortening.....Angulation..... ..Swelling of soft parts.....Pain.....
    Nerve involvement.....Interference with joint function.....Endurance.....
24. Mortality—Age of patient.....Main cause of death.....
25. Duration of absence from work.....weeks.....months.....
26. Is patient fully able to take his former job?.....
27. Present wage earning capacity compared with former.....
28. Compensation under insurance, legislative act or legal process obtained—Yes.....No..... Expected—Yes.....No.....

PROCEEDINGS OF THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA.

Wednesday, February 16, 1916.—The President, Dr. E. Y. Davidson, presided ; about 125 members present.

Dr. Prentiss Willson introduced Dr. J. Whitridge Williams, of Baltimore, and read the paper for the evening, entitled : Hemorrhage from Premature Separation of the Normally Implanted Placenta, with special reference to the Form Associated with Intramural Hemorrhagic Infiltration of the Uterus. Report of two fatal cases with autopsies. Stereopticon illustrations. Dr. Williams opened the discussion, which was participated in also by Drs. Moran, Brown Miller, H. D. Fry, Kober, Neuman, Stavely and Willson.

Wednesday, February 23.—The President, Dr. Davidson, presided ; about 115 members present.

In the absence of the Recording Secretary, Dr. A. L. Hunt acted in that capacity ; the reading of the minutes was omitted.

Dr. G. Wythe Cook, for the Executive Committee, reported that the committee had authorized the Legislative Sub-committee to take proper action in regard to the Sheppard bill, and to see such committee or members of Congress as should be necessary ; the sub-committee was authorized to submit the following proposed amendment to the bill : "*Provided*, That nothing herein shall be construed as abridging or curtailing the rights of physicians in active practice to prescribe alcoholic liquors, malt or other liquors for medicinal purposes, and that in futherance of such rights retail druggists are authorized and empowered to fill prescriptions therefor, bearing registered numbers, under the provisions of the Act of Congress approved December 17, 1914, entitled : 'An Act to provide for the registration of, with collectors of internal revenue, and to impose a special tax upon all persons who produce, import, manufacture, compound, deal in, dispense, sell, distribute, or give away opium or cocoa leaves, their salts, derivatives or preparations, and for other purposes,'" or amendment of like import.

Progress was reported in the efforts of the Legislative Subcommittee to secure provision for the establishment of a laboratory under the Health Department for the manufacture of vaccines, sera and other biological therapeutical products.

The Program Committee was authorized to arrange a joint meeting with the Baltimore City Medical Society, to be held in Baltimore April 7.

Dr. W. M. Barton presented a copy of his new book, "Manual of Vital Function Testing Methods," to the library of the Society. A vote of thanks was given to him for the donation.

Dr. D. L. Borden reported a case of Fracture of Pelvis. Dis-

cussed by Drs. W. P. Carr, Selby, Chipman and Borden. See p. 195.

Dr. O. B. Hunter read a paper on Comparison of some histopathological facts between the thyroid and thymus glands.

Dr. C. A. Simpson read a paper entitled: Roentgen-ray treatment of exophthalmic goiter. Lantern slide illustrations.

The two papers were discussed jointly, the discussion being opened by Dr. G. R. Scott, U. S. A., and by Dr. Chas. A. Waters, of Johns Hopkins; discussion also participated in by Drs. E. B. Behrend, Selby, Carr, Pfender, Roy, Reede, Willson, Hunter and Simpson.

Stated Meeting, Wednesday, March 1.—The President, Dr. Davidson, presided; about 115 members present.

The Treasurer submitted his report for February: Receipts, $140.00; disbursed, $46.20.

The following members were reported as in arrears for dues after due notice: C. C. Ammerman; time to pay dues extended, in consideration of his request therefor. Wm. J. Dillenback; dues remitted to date on account of ill health. Jno. B. Briggs, Jno. R. Buck, F. T. Chamberlain and Wallace Neff were dropped from the rolls.

The Chair announced the death of Dr. Allen Walker.

The Committee of Censors reported favorably on all the candidates for membership and nominees for honorary membership, submitted at the last stated meeting.

The following were elected to active membership: Daniel Lee High, George Washington University, 1907; Amy Jean Rule, Woman's Medical College, Penna., 1908; William Francis O'Donnell, Georgetown University, 1913; Charles L. Dugan, the same, 1912; Thomas Madden Foley, George Washington University, 1905; Arthur Morris Zinkhan, Georgetown University, 1912; Henry Louis Hayes, the same, 1890.

For associate membership: Robert Ernest Noble, Major, Medical Corps, U. S. Army; Frank Lester Pleadwell, Surgeon, U. S. Navy; Theodore Charles Lyster, Major, Medical Corps, U. S. Army.

For honorary membership: Admiral Wm. C. Braisted, Surgeon General, U. S. Navy; Dr. Rupert Blue, Surgeon General, U. S. Public Health Service.

A report from Dr. L. B. T. Johnson, delegate to the Midwinter Conference on Health, Public Instruction and Medical Legislation, A. M. A., was read and ordered filed. See p. 198.

On motion of Dr. Franzoni a vote of thanks was given to Dr. Johnson for his service as delegate and for his report.

A letter from the Secretary of the A. M. A. Council on Health and Public Instruction asking the coöperation of the Society in the matter of arranging lectures and supplying speakers for the

local observance of "Baby" Week, was read and the whole matter was referred to Dr. J. S. Wall, with authority to act for the Society.

A letter from A. O. von Herbulis submitting a proposition for the erection of an office building for physicians and dentists was laid on the table.

The following amendments to the Constitution were adopted:

"Amend Art. V, Sec. 10, of the Constitution by adding the following sentence at the end of the section: 'Members so dropped may, after report by the Committee of Censors, be reinstated by the Society upon the payment of arrears in dues.'"

"Amend Art. IX, Sec. 2, of the Constitution, by striking out the word 'four' and substituting therefor the word 'five,' the section to read as follows: 'Annual dues of *five* dollars shall be paid in January, etc.'"

An appropriation of $8.15 for printing stationery for the office of the Recording Secretary was ordered.

Dr. E. G. Seibert called attention to a published list of physicians which appeared in a recent issue of *The Washington Post*, and stated that inasmuch as his name had appeared in the list as a result of his subscribing to a proposed professional directory to be published by that newspaper company, he had addressed a letter of protest to the editor of the *Post*, and suggested that other members do likewise.

A motion by Dr. J. Lawn Thompson that the President be authorized to formulate a vigorous protest against the use made by the *Post* of the subscriptions of physicians to the proposed directory, and to send a copy to the editor of the *Post*, was laid on the table.

The following applications for membership were referred to the Committee of Censors. For active membership: William Olendorf Wetmore, Columbian University, 1895; David Oscar Smith, University of Michigan, 1910; Maurice A. Selinger, Georgetown University, 1915. For associate membership: Ales Hrdlicka, Curator, Division of Physical Anthropology, U. S. National Museum.

Dr. Carl Henning read a paper on Thrombosis of the cavernous sinus, with report of a case. Discussed by Drs. Butler, W. P. Carr, D. S. Lamb, Pfender and Henning. Dr. Lamb read notes of the autopsy in this case, and exhibited specimens.

Wednesday, March 8.—The President, Dr. Davidson, presided; about 70 members present.

An appropriation of $39.00 for rent of hall and use of lantern for January and February was granted.

The Chair appointed the following committee on memorial to the late Dr. Allen Walker: Drs. L. C. Ecker, C. L. Waters and J. T. Cole.

The action of the Program Committee in arranging a joint meeting with the Baltimore City Medical Society for April 7 was confirmed.

A letter from the widow of Dr. John P. Dunnigan expressing thanks for memorial resolutions was read.

The Chair announced the death of Dr. Wm. L. Rodman, President of the American Medical Association.

The Chair acknowledged the gift of a gavel for the use of the presiding officer, by Dr. D. S. Lamb.

Dr. Geo. Tully Vaughan read a paper entitled: Method of American Surgical Association for preserving records of fractures of long bones. See page 200.

Dr. W. H. Huntington reported a case of Purulent cerebrospinal meningitis and mastoiditis, with operation and recovery. Discussed by Drs. Butler and Huntington. See page 195.

Dr. D. S. Lamb showed the skeleton of a woman, age about 38, a cripple. It presented the following pathological lesions: Both humeri and femurs markedly curved as from rickets. There were two united fractures; an oblique fracture, lower third of radius; and an oblique fracture, lower fourth of left femur, with $1\frac{3}{8}$ inch shortening. This latter fracture probably occurred in early life, because the outer condylar surface of the left tibia was obliquely depressed, probably due to the position of the outer femoral condyle after healing. The left femur also showed a third trochanter. The left tibia was smaller than the right and nearly half an inch shorter; upper half of outer surface deeply channelled. The left fibula was half an inch shorter than the right but more robust. The vertebral grooves on the atlas were almost completely converted into foramina; the laminae failed to meet posteriorly. But the most interesting lesion was a dislocation of the right femur; the head of the femur was much atrophied, of irregular shape and quite porous; the upper border of the neck had a smooth facet from pressure against the upper border of the acetabulum; the neck much depressed; the lesser trochanter was small and with a smooth surface where it rested against the lower border of the acetabulum. The acetabulum was much enlarged, the articular surface roughened and showed an irregular perforation into the pelvic cavity $1\frac{3}{4}$ inches long and varying in width. The innominate bone was generally atrophied.

Dr. B. M. Randolph could not hope to throw any light on the pathological conditions which gave rise to the changes in the bones exhibited, but the condition of the femur and the ilium brought to his mind a case which might explain how the changes in these bones were started. The case was that of a man who was injured fifteen years ago when a horse fell on him; the injury involved the hip, and resulted in a chronic sinus, which heals and periodically breaks down. X-ray plates show that there is

erosion of the acetabulum and of the head of the femur, the loss of tissue being considerable. The picture suggests that the head of the femur had perforated the acetabulum and had entered the pelvis; the pus which formed after the injury had followed the psoas sheath and had pointed beneath Poupart's ligament.

Dr. Snyder asked if the bones shown by Dr. Lamb had any evidence of osteomalacia?

Dr. Lamb said that the bones were quite tough and hard. Bones which have undergone the changes incident to osteomalacia are so friable that they may crumble under the pressure of the fingers.

Wednesday, March 15.—The President, Dr. Davidson, presided; about 60 members present.

Dr. G. Wythe Cook, for Committee on Meeting Place, reported progress.

Dr. J. L. Thompson, for the Executive Committee's Sub-committee on Legislation, reported that the tentative draft of an amendment to the Sheppard Prohibition Bill which had recently been approved by the Society, had been perfected by Mr. Burton, counsel for the Society, and had been submitted to the Senate committee having the bill in hand. A letter from Senator Sheppard stated that he would seek the adoption of the amendment as nearly as possible in the language submitted.

A letter from the Central Citizens' Association having reference to fees charged by hospital internes for certificates of death in insurance cases was referred to the Executive Committee.

A letter from the Columbia Optical Company asking the Society to protest against the listing in the telephone directory of certain opticians as oculists was laid on the table.

In order to secure a large attendance at the joint meeting with the Baltimore City Medical Society, the President was authorized to appoint a Publicity Committee; he appointed for this purpose Drs. J. M. Moser, E. P. Copeland, B. M. Randolph, D. W. Prentiss, H. A. Ong, C. B. Conklin, H. E. Martyn, L. Eliot, D. P. Hickling, Carl Henning, A. P. Tibbetts, M. H. Prosperi, Walter Van Sweringen, Truman Abbe, J. J. Madigan and Martha M. B. Lyon, all of them secretaries of local and special societies.

Dr. W. B. Carr read a paper entitled: Some observations and conclusions of the Deputy Coroner. Discussed by Drs. Roy, W. P. Carr, Williams, A. A. Snyder and W. B. Carr. See p. 183.

Dr. B. M. Randolph reported the following case of typhoid perforation of the large intestine.

The patient was attended by Dr. W. H. Atkinson who called Dr. J. T. Kelley in consultation on the question of abdominal section; but the patient was too near death to undergo operation.

Necropsy by Dr. Randolph one hour after death; abdomen

distended with gas. In the right lower quadrant was the exudate of acute peritonitis; the exudate extended up nearly to the liver. Peyer's patches of ileum enlarged and ulcerated. Scattered through caecum and ascending colon were many small round ulcers, some of which penetrated to submucosa; one had perforated. Peritoneal adhesions, and "the serous membrane had attempted to close by invagination as with a Lembert suture." At this place was the most intense hyperaemia and maximum exudate.

Dr. W. H. Atkinson said that the case was clinically typhoid fever and the diagnosis had been confirmed by the Widal reaction. The patient was taken to the hospital in a very toxic condition; there was great tympany from the beginning of the disease. On account of the tympany the patient had been carefully watched for evidence of perforation, but the accident was not noticed. There was no pain and no evidence of shock; the first warning of the perforation was the appearance of adynamic ileus. It was then too late to operate; however, the patient was not a favorable subject for operation, even if the accident had been noted earlier.

Dr. D. S. Lamb remarked that the relative frequency of perforations of the large intestine in typhoid fever as indicated by the figures given by Dr. Randolph is not borne out by the number of specimens of this condition in the Army Medical Museum; the very few specimens there would indicate that the condition is rather rare.

Wednesday, March 22.—The President, Dr. Davidson, presided; about 60 members present.

Letters of appreciation of their election to honorary membership were received from Surgeon General Braisted, U. S. Navy, and Surgeon General Blue, U. S. Public Health Service.

A letter from the Secretary of the District of Columbia Dental Society proposing a joint meeting with this Society was referred to the Program Committee, with authority to act.

An appropriation of $44.05 was granted for printing and postage of program cards for February.

Dr. D. S. Lamb exhibited specimens of quintuplets; five mummified male human fetuses at 7½ to 8 months, from a case of quintuplets. It is said that at birth they weighed together 21¾ pounds. When received at the Army Medical Museum, however, the total weight was only 3 pounds 4 ounces. The mother was a white woman, age 39, weight 112 pounds, and already the mother of seven normal children when labor set in. She had become quite large and helpless, with some oedema of the lower limbs. The fetuses were born about 15 minutes apart; one head and four foot presentations. All died, one after another, between the 5th and 15th day after birth. There was no difficulty in the labor, no

laceration of perineum, and her recovery was uninterrupted. There was only one placenta with 5 cords and 5 sacks. This case was reported to the Obstetric Section of the New York Academy of Medicine in 1896 by Dr. R. A. Hibbs, of New York City, who had received the notes of the case from her attending physician, Dr. T. J. Mathews, of Mayfield, Ky., and published in the *Amer. Med. and Surg. Bull.*, N. Y. City, 1896, x, page 267; with two illustrations. The specimens were acquired by the Museum in February, 1916.

There was no history of multiple births in the families of either the woman or her husband. It is said that triplets occur once in 7,900 labors; quadruplets once in 371,126. In the literature there are records of 34 quintuplets, 11 sextuplets and 4 septuplets. He did not find any mention of octuplets.

Dr. W. S. Bowen reported a case of Dystocia from Ventrosuspension. Discussed by Drs. Moran, W. P. Carr, Prentiss Willson, Pagan and Bowen. See page 181.

Dr. R. A. Hooe read the paper for the evening, entitled: The management of prostatic obstruction with certain complications. Discussed by Drs. H. A. Fowler and Hooe.

Wednesday, March 29.—In the absence of the President, Dr. I. S. Stone presided; about 50 members present.

A letter was read, a reply from the Treasury Department to McLanahan, Burton and Culbertson, Counsel of the Society, in regard to a protest from the Society against the enforcement of a regulation requiring physicians to indicate on prescriptions for large amounts of narcotic drugs, the nature of the ailment for which the drug is prescribed.

A motion by Dr. Tom A. Williams that the letter be published in the ANNALS, that it be referred to the Executive Committee, and that that committee report what further action should be taken by the Society, was laid on the table.

On motion of Dr. G. Wythe Cook, as chairman of the Executive Committee, the counsel of the Society was authorized to appear before the Board of Medical Supervisors and request the annulment of the license of T. J. Kemp to practice medicine in the District of Columbia.

Dr. A. R. Shands exhibited Radiographic plates showing: (1) Dislocated semilunar bone; (2) Comminuted fracture of the os calcis of each foot; (3) Comminuted fracture of pelvis. Discussed by Drs. Groover and Snyder.

Dr. Tom A. Williams read a paper entitled: The management of delirium and cognate conditions. Discussed by Drs. Lowe and Williams.

WASHINGTON MEDICAL ANNALS.

Journal of the Medical Society of the District of Columbia.

Published Bimonthly by the Society, at No. 2114 Eighteenth Street, N. W., Washington, D. C. Subscription price, including postage, $1.00 per year, in advance. Single copies, 20 cents. Advertising rates given on application.

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Editorial.

HISTORY OF THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA.—Price $1.00, with 25 cents added if delivered in this city or sent by mail. Address Dr. C. W. Franzoni, 605 I Street, N. W. The books are in the custody of Dr. D. S. Lamb, at the Army Medical Museum.

THE WASHINGTON MEDICAL ANNALS, the official organ of the Medical Society of the District of Columbia, issued the first of January, March, May, July, September and November, will publish gratuitously such information of a medical, surgical and sanitary character, changes in personnel, &c., of hospitals, dispensaries, medical schools, medical societies and other medical agencies, as would be useful and interesting to the members of the Society. Address the Chairman of the Committee on Publication.

THE WASHINGTON MEDICAL ANNALS.—Back numbers.—Members of the Society who have back numbers of the ANNALS, and do not intend to preserve them, are requested to send them to the Chairman of the Publication Committee. Requests for such numbers are frequently received.

ADVERTISEMENTS.—Attention is invited to the advertisements in this issue. All the advertisers are reliable and responsible. It is suggested that they be given preference.

The 550 members of the Society by a little effort could largely increase the number of advertisements. Dr. Frankland is the member of the Committee on Publication who has charge of this matter.

THE OTHER MEDICAL SOCIETIES OF THE DISTRICT OF COLUMBIA.

CLINICAL SOCIETY.—Officers: F. L. Biscoe, President; W. J. Mallory, Vice President; E. P. Copeland, Secretary-Treasurer; Censors: L. A. Johnson and J. D. Thomas.

CLINICO-PATHOLOGICAL SOCIETY.—Active membership limited to 25. Inactive membership: those who have withdrawn from active membership after fifteen years. A limited honorary membership of eminent medical men. Meets on the first and third Tuesdays of the month from October to May, inclusive. Officers: President, G. Brown Miller; Vice Presidents, Loren Johnson and H. H. Kerr; Secretary and Treasurer, B. M. Randolph.

EMERGENCY HOSPITAL CLUB.—The club was organized early in 1915 by the members of the Staff of the Central Dispensary and Emergency Hospital. Meetings are held on the second Saturday of each month from September to May, inclusive; the officers are Ernest F. King, President; W. B. Carr, Vice President; D. W. Prentiss, Secretary and Treasurer.

FREEDMEN'S HOSPITAL MEDICAL SOCIETY.—Meets on the second Wednesday of each month from October to May, inclusive. Composed of physicians connected with the Staff of the Hospital and the Medical Faculty of Howard Medical School. Collins Marshall, President; C. A. Brooks, Vice President; C. A. Allen, Secretary-Treasurer.

GALEN SOCIETY of the District of Columbia.—Wm. H. Littlepage, President; Harry A. Ong, Secretary.

GEORGETOWN CLINICAL SOCIETY; twenty-five active members, limited to graduates of the Medical Department of Georgetown University. Meets at the University Club on the third Tuesday in the month. John Foote, President; J. Russell Verbrycke, Jr., Treasurer.

GEORGETOWN UNIVERSITY MEDICAL SOCIETY.—Meets on the fourth Saturday of the month at the University Hospital. The membership consists of the Alumni, Faculty and Senior Students of the Medical School. J. A. Gannon, President; T. F. Lowe, Vice President; J. M. Moser, Secretary-Treasurer.

GEORGE WASHINGTON UNIVERSITY MEDICAL SOCIETY.—Organized 1905, membership limited to Alumni of School and Members of the Faculty. Meets in the Medical Building on the third Saturday of each month from October to May. President, E. P. Copeland; Vice President, W. H. Huntington; Treasurer, E. G. Seibert; Secretary, C. B. Conklin; President's Council,

J. B. Nichols, W. W. Wilkinson, A. L. Hunt, J. Lawn Thompson, John Van Rensselaer. Active membership, 162.

HIPPOCRATES SOCIETY, membership limited to 25, with voluntary retired members after 10 years, meets on the second Thursday of the month from October to May. Officers for the year: J. R. Verbrycke, Jr., President; C. A. Simpson, Secretary.

MEDICAL HISTORY CLUB of Washington, D. C.—Officers: President, Frank Baker; Vice President, H. W. Lawson; Secretary, F. J. Stockman; Executive Committee, J. H. Bryan, Howard Hume, W. J. Mallory and the Officers. Members: Truman Abbe, Frank Baker, W. C. Borden, Joseph H. Bryan, G. Wythe Cook, John Foote, F. H. Garrison, Howard Hume, H. W. Lawson, W. J. Mallory, John B. Nichols, P. S. Roy, F. J. Stockman, I. S. Stone, John D. Thomas, Wm. A. White.

MEDICAL AND SURGICAL SOCIETY of the District of Columbia.—President, Wm. F. Sowers; Vice President, J. T. Kelley; Secretary and Treasurer, L. Eliot; Asst. Secretary, H. H. Kerr; Executive Council, John Dunlop, L. C. Ecker, H. G. Fuller, L. H. Reichelderfer and Eliot.

SOCIETY OF MEDICAL JURISPRUDENCE, Washington, D. C. —President, Wm. A. White; Secretary-Treasurer, D. P. Hickling. Meets on the second Monday of each month from October to June at University Club. Has from forty to fifty members.

SOCIETY OF OPHTHALMOLOGISTS AND OTOLOGISTS, Washington, D. C., meets the third Friday of each month from October until May, inclusive.

Officers: President, A. B. Bennett, Jr.; Vice President, A. H. Kimball; Secy.-Treasurer, Carl Henning, The Rochambeau.

Active members: A. B. Bennett, Jr., J. W. Burke, V. Dabney, W. T. Davis, L. S. Greene, C. M. Hammett, Carl Henning, E. B. Jones, A. H. Kimball, R. S. Lamb, F. B. Loring, O. A. M. McKimmie, W. B. Mason, M. E. Miller, Mead Moore, S. B. Muncaster, W. S. Newell, J. J. Richardson, E. G. Seibert, R. R. Walker, W. A. Wells.

Inactive members: J. H. Bryan, W. K. Butler, Wm. H. Fox, W. P. Malone, H. A. Polkinhorn, C. W. Richardson, D. K. Shute, W. H. Wilmer.

SOCIETY FOR MENTAL HYGIENE, DISTRICT OF COLUMBIA.—Organized at the New Willard June 3, 1915. Temporary President, Dr. Wm. A. White; temporary Secretary, Dr. D. P. Hickling. Organizing Committee: Surgeon General Rupert Blue, U. S. P. H. S., Miss Julia C. Lathrop, and Drs. White, Hickling and

Frank Leech. The object of the Society is to work for the conservation of mental health, the prevention of mental disease and deficiency, and improvement in the care and treatment of those suffering from nervous and mental disease and mental deficiency.

Society of Social Hygiene, Washington, D. C.—President, Dr. Charles F. Stokes, U. S. Navy; Secretary, Lt. Col. J. R. Kean, U. S. Army, Surgeon General's Office. The Society has four committees, namely: Education, Venereal Diseases, Protection of Women and Children, and Psychopathology. Yearly dues, $1.00. Persons desiring to become members should address Col. Kean and state to which committee they wish to be assigned.

Therapeutic Society of the District of Columbia.—Meets at the G. W. School of Pharmacy, 808 I Street, N. W., on the first Saturday in each month. G. W. Latimer, President; A. P. Tibbets, Secretary.

Walter Reed Medical Society meets on the fourth Thursday of every other month, from September to May inclusive. Composed of physicians located in the eastern part of Washington. J. S. Arnold, President; H. R. Schreiber, Vice President; M. H. Prosperi, Secretary; N. E. Webb, Treasurer.

Washington Medical and Surgical Society.—President, N. D. Graham; Vice President, R. R. Walker; Secretary, Walter Van Sweringen; Treasurer, F. E. Gibson; Curator and Librarian, E. H. Egbert; Executive Committee: L. H. Taylor, Chairman, G. S. Clark, G. S. Barnhart; Program and Auditing Committee: Wm. A. Jack, Jr., Chairman, J. R. Nevitt, Walter Van Sweringen; Membership Committee: F. E. Gibson, Chairman, Wm. P. Reeves, Caryl Burbank.

Washington Obstetrical and Gynecological Society.—President, J. F. Moran; Vice Presidents, G. B. Miller, Prentiss Willson; Secretary, Truman Abbe; Treasurer, D. W. Prentiss. Retired members—G. N. Acker, S. S. Adams, E. A. Balloch, J. W. Bovée, W. S. Bowen, W. P. Carr, G. Wythe Cook, M. F. Cuthbert, H. D. Fry, J. T. Johnson, D. G. Lewis, A. R. Shands, E. E. Morse, Elmer Sothoron, J. Ford Thompson, John Van Rensselaer.

Washington Psychoanalytic Society.—Meets the second Saturday of each month, from October to May, inclusive. Officers: President, Edward J. Kempf; Vice President, Robert Sheehan, U. S. N.; Secretary and Treasurer, Mary O'Malley. Program Committee: Robert Sheehan, U. S. N., D. Percy Hickling and John E. Lind.

WASHINGTON SOCIETY OF NERVOUS AND MENTAL DISEASES. —President, Wm. H. Hough; Vice President, Bernard Glueck; Secretary, J. J. Madigan. The Society has a limited membership of thirty, but welcomes Physicans and Surgeons interested in Neurology and Psychiatry. Meets monthly on the third Thursday at the Cosmos Club or a member's residence.

THE WASHINGTON SURGICAL SOCIETY.—Meets at 1621 Conn. Ave. the third Friday of the month at 8 P. M. The officers are H. A. Fowler, President; D. W. Prentiss and Walter Webb, Vice Presidents; H. G. Fuller, Secretary, and J. A. Gannon, Treasurer. Members of Council, H. D. Fry, J. F. Moran and the officers.

WOMEN'S MEDICAL SOCIETY of the District of Columbia. —President, Emma Lootz Erving; Vice President, Louisa M. Blake; Secretary and Treasurer, Martha M. B. Lyon; Corresponding Secretary, Mary Holmes.

THE SECRETARIES of the other Medical Societies of this District are reminded that the ANNALS will publish the schedules of their meetings.

AMENDMENTS TO THE CONSTITUTION AND BY-LAWS.—The following amendments have been made since the publication in Volume XII, March, 1913.

Constitution.—Article V, Section 4, adopted Nov. 4, 1914: before the words "Due notice" on page 142, insert "No application for membership that is rejected or withdrawn shall be renewed until after two years from the time of its rejection or withdrawal."

Section 10, same article; adopted Jan. 7, 1914: for "two years" substitute "one year." At the end of the section, add the words "Members so dropped may, after report by the Committee of Censors, be reinstated by the Society upon the payment of arrears in dues." Adopted March 1, 1916.

Article VI, Section 5, adopted Jan. 6, 1915: in the last line, for "two" substitute "three."

Article VIII, Section 2, page 148, 4th line from top: for the word "disorders" substitute the word "diseases."

Article IX, Section 2, first line, for the word "four" substitute "five." Adopted March 1, 1916.

By-Laws.—Article VIII, Section 9, page 153, adopted Jan. 7, 1914: No member of the Staff of any hospital receiving patients in private rooms shall attend such private patient sent to the hospital by a member of the Society, not a member of the Staff, unless specifically requested to do so by the attending physician.

Please note that the figures in Sections 7 and 8 of this article, instead of being 7 and 8 should be 5 and 6.

Some Special Committees of the Society:

On First Aid Conference.—Drs. C. S. White, H. H. Kerr and W. P. Reeves.

On National Legislative Committee.—Dr. L. B. T. Johnson.

On Regulation for Control of Contagious Diseases.—Drs. Frank Leech, H. H. Donnally, S. S. Adams, W. C. Woodward, N. P. Barnes, J. S. Wall and L. B. T. Johnson.

On Meeting Place of Society.—Drs. G. Wythe Cook, A. B. Hooe, A. L. Hunt, A. R. Shands and J. D. Thomas.

On American Red Cross.—Drs. L. H. Reichelderfer, L. B. T. Johnson and A. L. Hunt.

The American Academy of Medicine will hold its 41st annual meeting June 9 to 12, at Detroit, Mich., at the Hotel Statler.

Dr. J. D. Franzoni (brother of Dr. C. W. Franzoni, of this Society), for many years connected with the drug firm of Z. D. Gilman, this city, died April 22.

Samuel D. Gross Prize: $1,500.00.—This prize is given every five years to an American citizen, author of the best original essay of not over 150 printed pages, octavo, on some subject of surgical pathology or surgical practice, based on original investigations. Essays will be received up to January 1, 1920. Address the Trustees of the prize, Philadelphia Academy of Surgery, 19 South 22d street, Philadelphia.

Medical Corps U. S. Navy.—Examination for admission, June 16. For further information, address the Surgeon General, U. S. Navy.

U. S. Public Health Service.—Examination for admission to grade of Assistant Surgeon, May 31. For further information address the Surgeon General, U. S. Public Health Service.

Cancer.—American Society for the Control of Cancer.—The health authorities of quite a number of States have been especially active in disseminating information and advice with regard to the prevention and cure of cancer. The State of New York publishes a monthly bulletin called *Health News,* and the March number is devoted to the subject of cancer. A copy of this number can be obtained without charge by addressing the State Department of Health, Albany, N. Y.

U. S. Public Health Service Publications:

On Pellagra.—The important point to remember concerning this disease is that in the Spring the diet used will determine whether there will be pellagra in the Summer. A proper diet in the Spring will either altogether prevent or will lessen the severity of pellagra in June or July, when it usually appears. In a general

way the diet should consist of a minimum of carbo-hydrates and a maximum of animal proteins with legumes, as beans and peas.

Model Homes.—The Ellen Wilson Sanitary Homes to be built in Washington, D. C. With such houses, sickness and death, vice and crime diminish. This fact has been shown especially in Liverpool, England.

Typhoid Fever.—Seventy-six out of eighty-seven cases which occurred in a recent outbreak have been traced by the U. S. Public Health Service to infected milk. Had the first cases been reported to a trained health officer the outbreak could have been stamped out promptly.

Walking is the best exercise—and the cheapest.

The U. S. Public Health Service administers typhoid vaccine gratis to Federal employees.

Bad teeth and bad tonsils may be the cause of rheumatism.

Unpasteurized milk frequently spreads disease.

The air-tight dwelling leads but to the grave.

Moderation in all things prolongs life.

The careless spitter is a public danger.

Plague is a disease of rodents.

House screening is a good disease preventive.

Fingers, flies and food spread typhoid fever.

Pellagra may be prevented or cured by proper diet.

The U. S. Public Health Service believes that the common towel spreads trachoma.

Children from sanitary homes advance more rapidly in school than those from dirty premises.

Sags in roof-gutters may act as mosquito breeding places.

The public cigar-cutter is a health menace.

The U. S. Public Health Service maintains a loan library of stereopticon slides.

Whooping cough annually kills over ten thousand Americans.

Bad housing produces bad health.

Light promotes cleanliness.

A clean mouth is essential to good health.

Physical training in childhood is the foundation of adult health.

The U. S. Public Health Service issues publications on hygiene and sanitation for free distribution.

Isolation is the most efficient means of controlling leprosy.

Headache is Nature's warning that the human machine is running badly.

Bullets may kill thousands—flies tens of thousands.

Obesity menaces longevity.

The following members of the Society have died since last report: Dr. E. C. C. Winter, March 20; Dr. Robert L. Lynch, March 26; Dr. Hobart S. Dye, April 5; Dr. F. B. Bishop, April 30.

Dr. O. M. Muncaster, formerly a member of the Society, died in this city April 1; a brief sketch appears on page 282 of the History of the Society and a half-tone opposite page 89.

Mrs. Gertrude McCulloch Harding, wife of Dr. Harry T. Harding, of this Society, died April 30.

Journal of Cancer Research.—A new journal, published quarterly by Williams and Wilkins, 2419–21 Greenmount Avenue, Baltimore, Md. Subscription, $5.00 a year. First number January, 1916.

Embryology.—Drs. F. P. Mall, H. M. Evans and G. L. Streeter, of Johns Hopkins Medical School, have been making researches in this subject and have published about 100 papers thereon. To continue the work it is, of course, necessary that they should have material, and they ask for the following:

"All material passed in abortion. When an embryo or young fetus is not apparent, the tissue fragments which may contain the young ovum should be sent.

"Tubal pregnancies, if possible unopened; ruptured or unruptured.

"Pregnancies *in situ* removed for malignant disease, extensive myoma or other reason. Occasionally it becomes necessary to remove a uterus containing a fairly early pregnancy. Such a specimen preserved entire in ten per cent. formalin would be of the greatest value regardless of the age of the pregnancy.

"All the curettings from the cases of women before the menopause, where one or more periods have been missed."

The specimen should be placed at once in ten per cent. formalin and the bottle should be filled with the fluid in order to avoid shaking. The bottle should be placed in a mailing box and sent to Dr. F. P. Mall, Johns Hopkins Medical School, Baltimore, Md. Mailing boxes with formalin will be forwarded on request. Specimens brought to the Army Medical Museum, to Dr. Lamb, will be duly forwarded.

REVIEWS.

New and Non-Official Remedies, 1916; containing descriptions of the articles which have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association prior to January 1, 1916. Published by the Association; 450 pages; small octavo; price $1.00. This book, after a preface of two pages, gives a list of the members of the Council and the Clinical Consultants. Next come the rules of the Council, 10 pages. Next the remedies, 363 pages, alphabetically arranged. A general index, and an index to the pharmaceutical houses.

Finally, references to proprietary and unofficial articles not described in the book. A very useful book of reference. On consulting it, the physician is informed as to which proprietary medicines he may intelligently use.—D. S. LAMB.

REPORT ON STATE PUBLIC HEALTH WORK BASED ON A SURVEY OF STATE BOARDS OF HEALTH.—By Dr. Chas. V. Chapin, Commissioner of Health, Rhode Island. Prepared under the direction of the Council of Health and Public Instruction of the American Medical Association; 195 pages; with tables. The headings are as follows: Survey of State Public Health Work; Organization of the Department of Health; Powers; Local Health Administration and the State; Communicable diseases; Vital Statistics; Child Hygiene; Public Health Education; Food; Engineering; Miscellaneous duties; Financial statement; Rating of the State; Tables.—D. S. LAMB.

DR. H. T. BROOKS; DIAGNOSTIC METHODS, third edition. Published by C. V. MOSBY CO., St. Louis, Mo. The scientific data of this author are correct. The book should simplify the work of an interne or physician who does his own laboratory work, but of course cannot take the place of the larger works of standard reference. A book of this kind can be very useful in giving the most essential steps toward making a diagnosis. Dr. Sterling Ruffin, of our Society, has gotten up a similar pamphlet for the use of his students in making case histories, but it does not take up the subject of the various tests and their technique. All in all, the book may be useful to hospital internes and busy physicians, as the subject-matter is reliable.—W. B. CARR.

MANUAL OF VITAL FUNCTION-TESTING METHODS AND THEIR INTERPRETATION.—By WILFRED M. BARTON, M. D., Associate Professor of Medicine, Georgetown University, Attending Physician to Georgetown University Hospital and Washington Asylum Hospital. Published by RICHARD G. BADGER, Boston. 1916. 12mo. Pages, 249. (Price $1.50).

This little book is commended to the attention of the profession as a useful and stimulating volume. It is a manual containing much information, easily accessible, and at a convenient price.

The organs whose functions are dealt with are the liver, kidneys, heart, pancreas and the ductless glands.

An adequate review of its contents would involve a synopsis of what could be more profitably read in detail; an undertaking which is made easy by the careful way in which the purpose of the author to collect information heretofore broadly scattered has been carried out by arranging the subject matter so that any part may be referred to. A summary at the end of most chapters assists in grasping the important ideas explaned in the text.

The tests are not all chemical; many, as those of the heart, are mechanical in nature and require no apparatus. The material has been painstakingly threshed over and presented to the reader in a form that saves his time, and furnishes the required information on each subject up to date.

The reader is supplied with the author's opinion of the value of the various methods of testing the functional capacity of vital organs, and also the opinions of many others who have been working with the methods involved in the discussion.

Many procedures which seem of moderate value only are frankly so rated, and are described because they are the best that have been devised so far. The reader should not feel disappointed if he receives an impression that there is yet much to be desired and to be accomplished toward measuring the ability of some of the organs to perform their work. What has been done already is of great value in helping the practitioner toward the establishment of definite methods in estimating his patient's capabilities and therefore his progress toward recovery, and also the value of the treatment which is being used.

This compilation is therefore very useful for reference and in bringing to mind the details of the many tests when memory is not quite adequate for doing so.

The discussion of the tests necessarily involves so many physiological principles that a casual reader will, in a few minutes, receive additions to his knowledge of physiology that he could gather from other sources only by many hours of searching.

A few errata occur which careful proof-reading might have avoided. The reducing power of sugar on Fehling's solution is stated to be one-fourth of what it actually is, a mistake that might be misleading; this is hardly the fault of the compiler. It is possible that Durand, whose method is described, did not use a solution of the same strength as is familiar to us.

—W. Ashby Frankland.

A Handbook of Infant Feeding.—By Lawrence T. Royster, M. D. C. V. Mosby Company, St. Louis, 1916. Price $1.25.

Rarely has there been compressed into so small a volume so much that is useful and essential in the management of the feeding problems of infancy. As the author so well states in his preface: "The purpose of this book is to furnish the essentials and only the essentials of infant feeding in a compact and succinct form." He has succeeded admirably in this purpose and has furnished a volume of convenient size which might almost be carried in the pocket for ready reference.

The writer adheres to the percentage method in expressing the proportionate ingredients of artificial formulas, but points out that this is rather to be considered a working index of the composition of milk mixtures instead of a "method" of artificial feeding.

Attention is repeatedly directed to the advantages to be obtained from repeated examinations of the stools and an exceedingly instructive chapter has been contributed on this subject by Dr. John Lovett Morse.

Throughout the book there is a minimum of algebra, and what there is can be readily understood and successfully applied after a few moments' reading. The chapters on the care of premature infants and upon the handling of difficult feeding cases are especially practical and replete with valuable suggestions.

The volume could with advantage be added to the library of every member of that great group to which the author dedicates it, namely, "To the overworked and underpaid general practitioner who must of necessity be not only the family physician but the all-round specialist."—J. S. WALL.

RECENT PUBLICATIONS OF PHYSICIANS IN THE DISTRICT OF COLUMBIA.

W. M. Barton; Manual of vital function testing methods and their interpretation. Review in *Jour. A. M. A.,* May 13, 1577.

J. W. Bovée; Critique on inefficiency and neglect of surgery of cervix uteri. *Amer. Jour. Obstet.,* April.

J. G. B. Bulloch; Peculiar psychic conditions. *West. Med. Times,* April, 477. Also, Race suicide; same journal, May, 524.

John Constas; Some new points in the treatment of acute gonorrhoea; *Va. Med. Semi-Mo.,* April 7, 8.

R. H. Creel, P. H. S.; Prevalence of bubonic plague and its control; *Mil. Surg.,* March.

V. Dabney; Deaths attributable to intranasal operations and other instrumentation; *Surg. Gynec. and Obstet.,* March; abstract in *Jour. A. M. A.,* April 1, 1059.

R. G. Davis, U. S. Navy; An apparatus for filling vaccine ampoules; *U. S. Naval Med. Bull.,* April, 311.

W. E. Eaton, U. S. Navy; The hospital steward; concerning his qualifications, personal, educational and professional; *ibid.,* 269. Also, An unusual case of herpes zoster; *ibid.,* 323.

L. Eliot; Foreign bodies in the rectum; WASH. MED. ANNALS, January, 35; abstract in *Buffalo Med. Jour.,* April, 495.

A. C. Evans; Bacteria of milk freshly drawn from normal udders; *Jour. Infect. Dis.,* May; abstract in *Jour. A. M. A.,* May 13, 1581.

A. Farenholt, U. S. Navy; Preparations of Naval Medical Department for battle; *Mil. Surg.,* March.

F. H. Garrison; In defense of Vesalius; Reprint from Bull. Soc. Med. Hist. of Chicago, January, 47. Also, John Shaw Billings; Review in *Science,* April 14, 536.

F. M. Harrison; Role of hallucinations in psychosis; *Jour. Nerv. and Ment. Dis.*, March; abstract in *Jour. A. M. A.*, April 8, 1166.

H. H. Hazen; Diseases of the skin; Review in *California State Jour. Med.*, April, 463. Also in *Jour. A. M. A.*, April 15, 1268.

F. A. R. Jung; Die behandlung von Verdauungskrankheiten in Vereinslazarett; *Muench. Med. Woch.*, Feb. 22; abstract in *Jour. A. M. A.*, April 15, 1280.

M. L. Koch and Carl Voegtlin; Chemical changes in the central nervous system as a result of restricted vegetable diet; Chemical changes in the central nervous system in pellagra; Bull. 103, Hygienic Lab., February, 1916.

D. S. Lamb; Ulceration and perforation of stomach; WASH. MED. ANNALS, March, 96; abstract in *Jour. A. M. A.*, April 15, 1275.

L. C. Lehr; A general consideration of the present status of vesical papilloma; U. S. Naval Med. Bull., April, 191.

Arthur McDonald; Atrocities and outrages of war; *Pacific Med. Jour.*, April, 220.

W. J. Mallory; Diet in chronic nephritis; *Va. Med. Semi-Mo.*, Feb. 11, 525; abstract in *St. Paul Med. Jour.*, April, 142.

L. A. Martel; Case of extrophy of bladder; *Amer. Jour. Obstet.*, April.

R. B. Miller; New Manual for Medical Department; *Mil. Surg.*, March.

M. B. Mitzmain; Anopheles punctipennis and malaria; Reprint 324, Pub. Hlth. Repts., Feb. 11.

E. H. H. Old and R. H. Laning, U. S. Navy; Case of hypernephroma; U. S. Naval Med. Bull., April, 324.

C. A. Pfender; Indications for surgery or deep Roentgen therapy for myomata and metropathies; *Med. Record,* N. Y., April 1.

L. A. Rogers, W. M. Clark and A. C. Evans; Colon bacteria and streptococci and their significance in milk; *Amer. Jour. Pub. Hlth.*, April.

G. B. Roth; Digitalis standardization; the physiological evaluation of fat free digitalis and commercial digitalin; Hygienic Lab., Bull. 102, February.

J. W. Schereschewsky, P. H. S.; Necessity for better study by the medical profession of diseases in their relation to occupation; *Cleveland Med. Jour.*, March.

Atherton Seidell, P. H. S.; Vitamines and nutritional diseases; Reprint 325, Pub. Hlth. Repts., February 18.

R. Sheehan, U. S. Navy; Exclusion of the mentally unfit from the military services; U. S. Naval Med. Bull., April, 213.

C. A. Simpson; Roentgen ray treatment of exophthalmic goiter;

Med. Rec., N. Y., Sept. 4, 1915; abstract in *South. Med. Jour.*, May, 406.

C. G. Smith, U. S. Navy; Surgical conditions of the kidney; U. S. Naval Med. Bull., April, 334.

L. H. Smith; Two cases of obstetric paralysis involving only the musculospiral nerve; *Amer. Jour. Dis. Child.*, May.

E. A. Sweet, P. H. S.; The transmission of disease by flies; Supplement 29, Pub. Hlth. Repts., April 14.

J. W. Trask, P. H. S.; Practising physician: his relation to public health administration; *Pub. Hlth. Jour.*, April. Also, Significance of mortality rates of colored population of United States; *Amer. Jour. Pub. Hlth.*, March. Also, Statistics of diseases, their sources, uses and limitations; same journal, May; abstract in *South. Med. Jour.*, May, 426.

J. R. Verbrycke, Jr., Postoperative treatment of peptic ulcer and cholecystitis; *Med. Rec.*, N. Y., April 29.

M. West; Prenatal problem and influence which may favorably affect this period of the child's growth; *Amer. Jour. Obstet.*, March.

M. I. Wilbert, P. H. S.; Digest of comments on the pharmacopoeia of the United States of America, and on the National Formulary, for 1914; Bull. 105, Hygienic Lab., February.

T. A. Williams; To prevent nervousness in children; *Florida Med. Assn. Jour.*, April. Also, The aim and purpose of modern clinical neurology; *Va. Med. Semi-Mo.*, March 24, 606. Also, Diagnosis of a case of tremor; *West Va. Med. Jour.*, April, 340.

PERSONAL NOTES.

Dr. Cornelius De Weese, of Washington, and Laurel, Md., was married, April 26, in Baltimore, to Miss Bessie Anna Munnickhuysen.

Mrs. Mary A. Garton, mother of Dr. Harrison Crook, of this Society, died May 10, aged 96 years.

Dr. D. C. Howard, U. S. Army, has been transferred to the Canal Zone.

Dr. Philip Newton, of this Society, an officer in the Russian army, who has been sometime in this country, will shortly return to Russia, it is said, taking with him fifteen new ambulances fully equipped.

Vol. XV. JULY, 1916. No. 4.

WASHINGTON MEDICAL ANNALS

SYMPOSIUM ON DENTAL DIAGNOSIS AND ORAL SEPSIS.

Joint Meeting of the Medical Society of the District of Columbia and the District of Columbia Dental Society, April 19, 1916.

"WHAT CONSTITUTES A DENTAL DIAGNOSIS."

By Clyde M. Gearhart, D. D. S.,

Washington, D. C.

The opportunity before the dental profession to assume an important part in the preservation of the general health is almost without parallel in medical advancement. There seems to be no question but that the mouth contains more foci inimical to health than all other regions of the body combined. The secondary effects of these foci present great difficulties to the physician in treatment. The foci are easily recognizable by thorough mouth examinations, which must be made by the dentist. The means of protecting the general health in their treatment are simple. Success depends upon a full understanding of the situation by both physician and dentist. With this in mind it is my privilege to discuss "What Constitutes a Dental Diagnosis."

When a physician refers a patient to the dentist for a diagnosis of the mouth he should expect to receive a competent report upon probable elements of systemic infections, hereinafter named.

The time was when, upon the patient presenting himself for examination, the dentist, employing the use of mouth mirrors and exploring points, casually surveyed the teeth, and after noting

the number of cavities, dismissed the patient, it being his opinion that the examination was complete. A similar perfunctory examination has been indulged in by a number of physicians who conducted their own dental examinations. Cursory examinations of a like nature today indict the examiner with little short of criminal negligence or ignorance.

Determination of the vitality and health of each tooth must be made. As a large number of pulpless or devitalized teeth have diseased periapical areas, we regard each devitalized tooth with suspicion until it proves itself innocent. The x-ray applied in dental diagnosis is of inestimable value. By the use of the extra-oral plate, exposures are made of all the teeth. By this plate we are rewarded innumerable times by the detection of unerupted teeth, supernumerary teeth, cysts, antrum affections and, many times, an abscessed molar, possibly indetectable in a film because of a different aspect; foreign bodies; in fact, the solution of the problem has often been given in a most dramatic manner. Then with intra-oral or dental films exposures are made of all devitalized teeth. Film radiographs distinctly disclose rarefied areas existing about the apices of roots.

I may state as an irrefutable dogma that the radiograph is not a picture of disease. It is a record only of the varying resistance to the passage of the ray offered by the parts pictured. The interpretation of the meaning of these shadows, and a decision as to whether they are caused by pathological conditions, requires on the part of the radiographic diagnostician a full knowledge of the clinical expressions of the various affections and of the varying shadows cast in consequence thereof. The experienced operator interpreting the radiograph is enabled to determine by further examination, percussion or other symptoms whether a necrotic condition is present, that may not only be incurable, but a distinct menace. It is not to be assumed that all rarefied areas are pernicious, or that their discovery condemns the tooth, but it is decidedly incumbent upon the dental diagnostician to point out the probability of a focus of infection being present.

He has facilities at his command to ascertain from a bacteriological examination, with cultures taken from the periapical region, what, if any, bacteria are present. The knowledge that teeth presenting rarefied areas or blind abscesses are, and have been, performing their masticatory function with comfort is not indicative of a normal condition, for, most unfortunately, the infected tooth seldom gives any warning, unless the acute stage of infection occurs, notwithstanding a bacteriological examination may find streptococcus pyogenes, pneumococcus, viridans and a host of other virulent forms abounding, and to these are attributed definite lesions, as endocarditis, nephritis, chronic arthritis, appendicitis, cholecystitis, ulcers of the stomach and other maladies, besides many cases evidencing general impairment of health

and vigor, with or without recognizable lesions. I need only make mention of these pathological conditions to again impress you with the full value of a scientific dental diagnosis.

Other disclosures of pathological significance are the detection of cysts, also the presence of unknown root fragments left in the alveoli after an unsuccessful extraction, perhaps many years before, remaining comfortable all the while, but a focus of infection, nevertheless. Then there are the diseased antra, roots in the antrum, and, in fact, so many abnormalities that we have no preconceived idea as to what conditions may present.

Our literature is permeated with the reports of cases of the effects of reflex dental irritation due to abnormal and continued stimulation of the ultimate endings of the fifth cranial nerve in and about the teeth. The list includes almost every form of disturbance from tic douloureux to dementia precox.

A most important disclosure during our diagnosis, that has to be reckoned with, not only as a direct association of cause and effect, but also as an etiological factor in many of the nervous disturbances and other ills that affect mankind, is the pathological significance of impacted and unerupted teeth. The teeth most commonly impacted are the third molars and cuspids but by no means should we infer that no other than these teeth may be impacted, or that there may not be supernumerary teeth present.

In cases of impaction of the lower third molars there is frequently found a pericoronal suppuration, where pus formation resulting from infection in the pocket that is formed by the flap of gum tissue covering the crown of the tooth, that is partially erupted, may be seen. Such a bacterial infection may result in an acute or chronic ulceration of the mucous membrane of the pocket, often involving the submaxillary lymph nodes. This infection passing by direct surface extension or by tissue continuity has caused persistent and recurrent attacks of tonsilitis and pharyngitis, that ceased entirely following the obliteration of the pericoronal focus.

In the patient of immature years there is a distinct phase of dental diagnosis that is too often unobserved. I refer to the youngster who is afflicted with adenoids. The popular procedure today is to remove the adenoids, but that operation is not a prophylactic measure, for it does not remove the most frequent cause. A proper dental diagnosis might often suggest that this enlargement of the adenoidal tissues in the nasal pharynx was caused by a lack of development of the superior and inferior maxillae. In the hands of a capable orthodontist the superior maxillary bones may be developed and the lower arch expanded, thereby allowing the contiguous bony structures to speedily adjust their relations and provide themselves with an adequate amount of room. Adenoids often disappear when the cramped nasal cavity is enlarged, and are rarely found in children whose

facial anatomy has not been impaired. Undeveloped maxillary bones mean the possibility of the impaction of practically all the erupting permanent teeth and may be a cause of many secondary symptoms.

Naturally the dental diagnosis includes a most careful consideration of pyorrhea in all its attendant phases. You are all too familiar with this common malady to warrant my giving it much time. As familiar though as everyone seems to be with pyorrhea, the absolute indifference with which it has often been treated leads me to suspect that unless the case has progressed to the last stages, when the wobbly teeth are staggering in despair, and the patient demands relief from the discomfort accompanying this stage, the dentist or physician does not consider it worth while to apprise the sufferer of its ultimate deplorable ending and its attendant dangers from infection. Pyorrhea is, briefly stated, a breaking down of the alveolar process, concomitant with that of the peridental membrane and gum tissues, accompanied by extravasations of pus and blood that have no elimination other than through the alimentary tract. Autointoxication, resulting, is accountable for many ills, the seriousness of which we know. It is our beholden duty to hunt for symptoms of pyorrhea in its incipiency. It does not go around "labeled," and failure to recognize it in diagnosis, is an unpardonable blunder. Its dangers are so grave that in cases where it has progressed, the rational procedure is to prescribe remedial measures for teeth presenting favorable prognosis, and to designate the removal of those not amenable to treatment, without delay.

In the dental diagnosis there also remains to determine restorations of carious teeth, the condition of fillings already inserted; examination of their margins to see if they are finished properly; examination of their contact points; examination of their occlusal surfaces and occlusion, also the status of any other work that has been inserted; to plan future work that may be indicated, so that the patient will be provided with a masticatory apparatus commensurate with his needs to properly masticate his food.

Briefly, the foregoing are essentials that must be included in the record of every dental diagnosis.

Nothing short of determining every one of the phases mentioned will be adequate in a scientific dental diagnosis, for in the normal healthy mouth there must be no blind abscesses, no pus pockets along roots, no chronic abscesses, no ulcerations, no low-grade inflammation, no carious teeth, no impacted teeth, no under development of the maxillae, no pyorrhea, or any other source of infection.

The slogan of the physician today is "Eliminate the Infection," and in his sphere the dentist of today is qualified and ready to do it from a dental standpoint.

WHAT MODERN METHODS CAN DO TO ELIMINATE ORAL SEPSIS.

By Arthur B. Crane, D.D. S.,

Washington, D. C.

It is probable that a larger proportion of diseased teeth are now extracted than before the radiograph became a common adjunct to the means of dental diagnosis. It is equally true that the percentage of teeth restored to health by modern methods is also greatly increased. While the extracting forceps is a valuable instrument in eliminating grave infections from the mouth, the competent dentist should have precedence in deciding upon the necessity for its use. In dental procedure it should occupy the same position that the amputating saw does in surgery.

Accepting the theory of the focal origin of many systematic diseases, dentistry has endeavored to so reconstruct her technique that oral sepsis may be controlled and looks with faith toward the time when it may even be generally prevented. Infections that in the past were unrecognized or perhaps winked at, are now intelligently sought out and scientifically combatted.

Formerly the dentist who cleaned the teeth and prescribed a mouth wash felt that he had done his whole duty in the treatment of gingivitis, but it is now recognized, as pointed out by Black, that in the great majority of cases this insidious disease is the precursor of progressive destruction of the pericementum, and also that the amount of absorption from this low-grade inflammation is very great. Gingivitis is very responsive to treatment which affects the removal of the irritating factors. Lack of contact or faulty contact between adjoining teeth is corrected by the insertion of fillings having a proper contact point. Overhanging fillings, as well as ill-fitting crown and bridgework which impinge upon the gingivae are ground down or replaced by faultless restorations. Deposits of calculus are removed and their reformation prevented by the practice of correct mouth hygiene.

Pyorrhea alveolaris has lost its terrors for the dentist who has adopted surgical methods of treatment. In so far as the dental profession has followed the will-o-wisp of medicinal treatment of this condition, whether local or general, failure has been the result, but where the diseased portions of the affected roots have been carefully planed and polished and dead or dying tissue surgically removed, results have been most gratifying. Daily gum massage and scrupulous mouth hygiene by the patient, together with prophylactic treatments by the dentist at necessary intervals will, with rare exceptions, absolutely prevent reinfection, provided the same precautions are taken to prevent irritation as noted under the treatment of gingivitis.

Alveolar abscess offers a less encouraging field for hopeful

prognosis. It is here that we join in the humble confession that we have left undone the things which we should have done and done those things which we should not have done. Without radiographic inspection any tooth which was comfortably functionable was satisfactory to dentist and patient alike. Working in the dark on hard, unyielding tissue, the only wonder is that any root canal at all was perfectly opened and filled.

To this physical impediment add the fact that until Hunter, in 1911, so vividly called attention to the relation of oral sepsis and systemic infection there were but few, in either the medical or dental professions, who considered alveolar abscess of more than local import.

The danger being known, dentistry has not been slow to acknowledge the mistakes of the past, and the conscientious efforts of many scientific investigators are leading us on to a standardized method of controlling periapical infection.

Prerequisite to the treatment of alveolar abscess the canal in the affected root must be opened and cleansed to its apical extremity. It is customary to demonstrate that this has been accomplished by passing a wire into the canal for radiographic examination. The lack of phagocytosis within the tooth makes it necessary to depend upon antiseptic treatment alone to combat the infection within the canal, but the use of irritating antiseptics such as phenol or formalin is now generally condemned, as the almost inevitable introduction of such drugs into the periapical region necessarily results in a necrosis of the cells with which they come into contact. Bland drugs have proven efficient in sterilizing the canal, but it is doubtful if the contents of the dentinal tubules can be removed or sterilized by any safe technique at present available. It is good practice, therefore, before filling the root to seal off this infection from further activity, with a solution of resin in chloroform as suggested by Callahan.

As a means of sterilizing the periapical tissues the investigations of Hartzell, Rhien and many others have proven beyond peradventure that where the infected area is small, ions of zinc introduced through the open root canal will absolutely accomplish this purpose. The manner in which this takes place is not clearly understood, but after one or two ionizations in selected cases a broach passed through the previously sterilized canal into the periapical tissues will not produce a growth upon an agar slant.

In the light of the possibility of hematogenous infection of unfilled root canals it becomes necessary that the apical foramen should always be hermetically sealed. In the effort to accomplish this some are advocating the projection of a gutta-percha point into the periapical region. The opinion that such a filling can be the source of subsequent irritation is apparently disproven by literally thousands of radiographs showing the encapsulation of the gutta-percha point and root apex with normal bone. While

the desirability of such extended filling is open to debate, it is clearly better that the filling should penetrate the apical foramen rather than fall short of reaching it.

The necessity for surgery in the treatment of most cases of periapical infection must be recognized and encouraged by dentist and physician alike. It is extremely doubtful if any infection which has once reached the stage of active pus formation can be eliminated by other means. Drainage through the alveolar mucous membrane, root resection and curettage must all become more universally practiced if teeth so affected are to be made safe.

Where any considerable portion of the root apex is covered with necrotic cementum the root apex must be resected and it is a wise precaution to fill the end of the remaining stump with amalgam, thus preventing reinfection through the tooth. Where the cementum is vital, as in acute cases, a window cut through the alveolar plate over the infected area furnishes means for prolonged drainage. If granulation tissue or rarefied bone is present thorough curettage is indicated.

In the responsibility for the prevention of oral sepsis the physician has a rare opportunity to be of service. This possibility lies in more regular and careful attention to the teeth of children. Relatively few patients under the age of puberty are seen by the dentist, and careful mouth inspection by the physician in his daily rounds will do much to correct this evil.

The early correction of irregularities in the dental arch and periodical cleaning of the teeth by the dentist will go far toward preventing decay, irritation of the gingiva and under development of the bones of the face.

Where the cavities do develop a nice perception of anatomical lines in making the restoration will mitigate the calamity. Where it becomes necessary to extirpate the pulps of teeth discontinuance of the use of arsenic and other devitalizing drugs in favor of their extirpation under local anesthesia with aseptic technique will operate to prevent subsequent infection of the periapical tissues.

Conclusions.

Teeth should be extracted only upon the advice of a competent dentist.

Gingivitis in the vast majority of cases leads on to pyorrhea alveolaris. Both of these infections can be eliminated by modern dentistry.

Alveolar abscess is often responsive to treatment, but surgical methods should be more commonly practiced and root canals should be absolutely filled to prevent reinfection.

In the prevention of oral sepsis the physician shares the responsibility with the dentist, as the greatest hope lies in intelligent care of the mouths of children.

THE RELATION OF MOUTH INFECTION TO GOITRE.

By E. H. Reede, M. D.,

Washington, D. C.

I regard it as a very great privilege to be present at this joint meeting which represents an epoch in the medical and dental history of Washington. No more progressive was the summoning in 1789 of the *Tiers Etat* into the parliamentary counsels of France than is now the calling of this third estate of medicine, the dental faculty, into conference with the surgeon and internist. There was a time in England when the sole aristocrat of medicine, the surgeon, would have scoffed at conferring with the humble doctor druggist, and it was not until the internist built up his diagnosis upon scientific research that the physician was admitted to the counsels of the surgeon. Today there is developing throughout the country a class of dentists whose opinions are based upon carefully weighed evidence and who are devising and carrying out operative procedures as delicate in technique as some of the more important surgical operations. And the time has come when the surgeon and internist now feel that in the presence of a general systemic infection they need the scientific dentist in consultation, who shall in the first place give or withhold a clean bill of health as regards the mouth, and in the second place, who, finding a focal infection, will actively and adequately erase it from the clinical picture by appropriate measures.

A third phase is seen when in the presence of ill health, the dentist may be the first to find the infection, and by insistent efforts at identification may isolate the organism at the only time and place that it comes within culturing distance of an observer. It is, I realize, a great responsibility to foist upon the members of a profession who had come to be regarded as the essential artisans of pulchritude, to tell them that they are not only the conservators of health but the custodians of life itself; but great responsibility breeds great knowledge, and I believe the greatest advance in medicine in the next decade will be the offspring of this alliance of doctor with dentist. This is not so chimerical to assume if you stop to realize that that form of Bright's disease known as chronic glomerulo nephritis seems shown by the work of Councilman, Libman and Baehr to be caused by that organism peculiarly dental in its habitat, the streptococcus viridans. Moreover, Rosenow's most recent work reports the isolation in 29 cases of fibrocystic ovaries out of a total of 51 cases of this green growing streptococcus. So that it is not impossible that the future attitude of our dentist toward the bacterial flora of the mouth will add or subtract actual years to or from our life.

No organ is more unintrenched against the inroads of the bacterial hordes of the mouth than is the thyroid gland, and this mainly by reason of the lymphatic channels which Ehrhardt (1) has shown exist between the submaxillary and sublingual glands and the thyroid.

The hypertrophic reaction of the thyroid to adjacent infection was exhaustively demonstrated 27 years ago by that pioneer in experimental work upon the thyroid, Halsted, of Baltimore, wounds of the thyroid healing by granulation being accompanied by hyperplasia while those healing *per primam* were not so affected. Halsted also produced hypertrophy by injection of cultures of staphylococcus into the peritoneal cavity. Many observers record the enlargement of the gland in such general infections as tonsillitis, appendicitis, pneumonia and typhoid fever. For instance, Vincent has reported 86 cases of acute thyroiditis occurring in acute articular rheumatism. Indeed as McGlannan, of Baltimore, says, "Enlargement of the gland is so constantly associated with the course of acute infection that it seems a normal function."

The relation of infection of the tonsils and accessory sinuses has been most markedly emphasized by Beebe who, from observations made on 3,500 cases of exophthalmic goitre, concluded that between the ages of 16 and 24 about 38 per cent. had a nasopharyngeal infection. Beebe's opportunities for observation have been exceptional, and he has furthermore delimited a clinical group of symptoms in thyroidism which may be termed chlorotic type of hyperthyroidism, because of its confusion with true chlorosis. This consists of the occurrence in girls between the ages of 12 and 20 of an enlarged thyroid, chronically infected tonsils and adenoids, gastro-intestinal disorders with constipation, and moderate nervous and heart symptoms. He believes this to be the starting point of most exophthalmic syndromes.

Billings first noted the relation between alveolar abscess and goitre and reported a series of cases where prompt subsidence of the thyroid enlargement and of the symptoms followed removal of the foci of infection in the jaws.

Rosenow has isolated a streptococcus in 25 out of 32 cases of goitre from the excised gland, and twice he has recovered an organism from the blood of an exophthalmic. He isolated an organism from the gland of 8 of 12 dogs having goitre, and reproduced a goitre twice in dogs by intravenous injection of the organism.

I wish tonight to cite from my own experience some observations on the coincidental occurrence of thyroid enlargement and oral sepsis in which the infection seemed to affect the gland independently of the tonsilar or other source of the infection, and to comment upon a syndrome common in young children ranging in age from 5 to 12. Halsted's experience that the postoperative fragment in the dog tended to hypertrophy if the wound was

infected, throws a suggestive light upon the case of Mrs. L., aged 24, from whom Dr. Edward Parker some seven years ago removed the isthmus and one lobe for cosmetic reasons. Dr. Parker assures me that at that time Mrs. L. had absolutely no signs of overactivity of the gland. At the present time she exhibits an enlargement of the fragment greater than the original goitre. There is evidence of oversecretion, in a tachycardia constantly over 100, a tremor of the hands, marked insomnia, intense headache, irritability, and general nervous instability. Her mouth is very bad; there are several carious teeth, a supernumery incisor and considerable marginal irritation and recession of the gums. The tonsils are large and fibrous. One feels that the gland has suffered in the presence of this mouth condition.

An exacerbation of a mouth infection is at times very closely connected with the appearance of thyroid enlargement and even exophthalmic symptoms. Miss T., age 35, represents a frank type of exophthalmic goitre as well as an instance of extensive dental engineering in that she has four sets of bridges. She is probably the most toxic case of goitre occurring in Dr. Mitchell's service this year. Her disease reached a crisis in March, 1915, when she had continuous vomiting, bulging eyes and cardiac insufficiency, following an increasing nervousness of two years. Just prior to her ill health, *i.e.*, about three years ago, she had her dental work installed, which was followed by the appearance of an alveolar abscess. At the present time there is a bad gum infection with recession and much foul retention under the bridges. One wonders what will happen to the postoperative fragment if these bridges are not interfered with. I may say that in this case the removal of the isthmus and 1⅓ lobes has been followed by a recession of all symptoms and what seems to be a perfect cure.

The acuteness of the mouth infection and of a thyroiditis are sometimes exquisitely paralleled. Miss E. B., aged 19, for two weeks had been developing a progressive asthenia until unable to continue at her work. Anorexia was accompanied by nausea. There was pain around the heart on walking, and climbing stairs caused panting. Headache was constant. The thyroid was enlarged and showed active vascularization. The heart was a little out, with a pulse rate of 160 and temperature of 101. Systolic pressure 105. Tremor of the hands; no protrusion of eyes. There was a marginal gingivitis with tenderness and a small palpable cervical gland. It almost seemed an idiopathic thyroiditis in that no active focus was apparent. The teeth seemed healthy. Some three days later the situation was clarified by the appearance of a swelling over the left jaw and the evidence of pus around two lower semi-submerged wisdom teeth. From these centers the infection had spread along the gum margins of the rest of the mouth. The pus pockets were cleared and the thyroid symptoms

disappeared, although a hypertrophy remains. The tonsils were not involved.

The relation of the tonsils as direct accelerators of thyroid hyperplasia is fairly generally accepted now, I think, by throat men, but the more mouth infections I see the more I am inclined to feel that most tonsils, especially in children, are infected by tooth-cultured bacteria. It is surprising what one alveolar abscess will accomplish as a propagator of infection.

Miss C., aged 22, subject to recurring attacks of arthritis, was advised to have hypertrophied tonsils removed, and in November, 1914, Dr. Walker did a tonsilectomy. The patient did not mention that a pivoted lateral incisor had abscessed leaving a sinus. Promptly after the operation the temperature rose and remained up, there was pain in the temporo-mandibular articulation and a grave gingivitis arose. The gums were swollen, tender and bleeding, and exuded pus at the margins. Her dentist expressed the opinion that it was an advanced stage of Riggs' disease. The gum condition gradually improved, but Miss C. fell more and more out of health with the increasing nervousness, attacks of syncope, asthenia and headaches so severe and so incapacitating that they were attributed to an acute glaucoma. On November 19, 1915, recurring attacks of fainting had interrupted her usefulnes as an office stenographer. At this time she had a vascular goitre, soft, throbbing, tender; the dulness of a dilated heart reached to the axilla, a pulse of 100 was associated with the murmur of relative mitral regurgitation, and there was a tremor of the hands. There was no exophthalmos.

My impression was that we had to do with a fairly active thyroiditis dependent upon the alveolar infection and that the cardiac condition was thyreotoxic and not endocarditic in character. A series of conferences was then entered upon between the patient, the dental consultants and her physicians. The following points were at issue: first, the possibility of obliterating the infection by treatment through the root canal, a dental viewpoint that was stoutly supported by the patient to whom the cosmetic advantages of this procedure seemed paramount; the second dental opinion was that only a root amputation would suffice, while the medical advisers took the stand that in the final analysis extraction was to say the least adequate and decisive. Days were spent in discussion until finally an extraction was performed which was followed by a progressive and complete disappearance of all symptoms. The girl now seems in perfect health.

The manifestations of thyroid disease are protean and their lethal results are not restricted to the exophthalmic type. Exophthalmic goitre is not in itself an acute disease but the appearance of an acute phase in a pre-existing ailment. One may, I think, delimit some dozen fairly definite clinical syndromes in hyperthyroidism, each of which affords a varying prognosis. I

believe, however, that a patient who has once exhibited a crisis in exophthalmic phase will find no termination to her illness short of the actual surgical removal of at least one and one-third lobes.

The Mayos are roughly using five groups at present : (1) the exophthalmic (2) the toxic non-exophthalmic with high blood pressure, (3) the toxic non-exophthalmic with low blood pressure, (4) the non-exophthalmic, of inconstant toxicity with low blood pressure, and (5) the non-exophthalmic, nontoxic, low pressure group.

The ground work of any hyperthyroidism is laid in a hyperplasia or increase in the secreting epithelium which, when it becomes grossly evident we speak of as a hypertrophy or goitre. I believe the hyperplasia is in all cases a result of bacterial irritation. Beebe is inclined to attribute its inception to an age period beyond 12 subsequent to a naso-pharyngeal focal infection. I have a series of some 50 cases below the age of 12 and as early as 5, where the infection is coincident with a chronic gingivitis dependent upon decay of the first teeth, which leads me to infer that a certain proportion of thyroid dystrophies may take their origin in childhood. I doubt much whether physiological demands or psychic trauma can drive a non-infected, non-hyperplastic thyroid into the stage of toxic hyperthyroidism.

This symptom complex, which is common in school children, is characterized by the presence of a goitre, a gingivitis, and generalized incoordinate movements of the muscles almost choreiform in character ; it might well be termed the pseudochorea of thyroidism.

On examining the mouth one notices that the tongue is large, translucent and indented, the uvula is large, pendant and translucent. The tonsils when present are red, irritated, with many trabeculae and with enlarged subtonsilar lymph glands. The submaxillary and sublingual glands are enlarged and often tender. The gums have pulpy cerise-colored tips which bleed easily, there are usually one or more carious teeth which have disintegrated to the gum level, are filled with granulations and often show a sinus over the root from which the marginal infection graduates throughout the mouth.

The thyroid is relatively large, soft, vascular and most perceptible on swallowing. Eye signs are fairly constantly present, especially Von Graefe's, Rosenbach's and Kocher's. Sometimes an exophthalmos occurs. The pulse rate is increased, the cardiac area is more to the left and with much cardiac irritability, a mitral systolic murmur is evident. There is no tremor to the hands.

The motor incoördination replaces or anticipates the adult tremor which seldom occurs before 12. There are constant, irregular twitchings of most of the muscles without volition. This same incoördination is commonly seen in children who are re-

ceiving too much thyroid as medication for undervelopment. These children give much trouble in school because their attention seems as uncontrollable as their muscles, and they are often behind their grade. As a child of 8 said to me the other day, "I try hard, but I can't keep still, and I can't stop talking, and so I get low marks." Their metabolism suffers inordinately, so that both their nutrition and their muscular strength are minimal. Vasomotor anomalies are common, the hands are cold and cyanotic and the skin of the body marbled.

The course of the nervousness is that it improves after the summer vacation, grows worse during the winter or when the strain of discipline gets irksome, and continues until the second crop of teeth submarine the offenders. More of these children are probably seen in the office of the dentist than the physician. The family usually catalogues them as nervous or delicate children and, having done so, dismisses them from consideration.

The usual examination reveals something like this: K. M., boy, aged 8, shows a goitre and general muscular incoördination. Tonsils were removed one year ago. Gums are swollen, cerise-margined with several badly decayed teeth. The gums bleed readily. The opening of a sinus is observed above one root. This boy is considered bad by his teachers in that he jumps up in his seat without reasons and punches the other boys when in line; or this (A. G.) boy, aged 8; tonsils were removed 2 years ago. Goitre and incoördinate movements. Submaxillary and sublingual glands enlarged. On the right above is one root; below, one root and a cavity with spongy gums. On the left, a cavity in a 6 year molar and another root.

The improvement which may fail to occur by overlooking the mouth infection is illustrated by this case. Blanche S., aged 8, referred by Dr. Dabney with the diagnosis of acute thyroiditis, chronically inflamed tonsils. There was a very evident goitre, moderate tachycardia, and the eye signs of Dalrymple, Stellwag and Joffroy. An irritative pressure cough occurs and involuntary jerking movements of all the muscles. She walks in her sleep and trembles when startled.

The tonsils are large and fibrous; there are four carious teeth with spongy gums. Tonsillectomy was performed by Dr. Dabney in May, 1915, the child was then referred to the family dentist for dental treatment and withdrawn from school. During the summer in the country she improved, but a month after returning to school in the fall she became nervous again and, much to my chagrin, returned not at all well. She was having daily nausea, her movements were almost chorea-like, and the neck had grown 3 cm. in circumference. At this visit the mother casually remarked "I forgot to tell you that our dentist refused to extract Blanche's teeth because it will cause narrowing of the arch and spoil her second teeth." The mouth was worse than before. Dr. Barr

then saw this case in consultation and advised extraction. One month later, after extraction, the neck had diminished in size, the incoördination had entirely disappeared and new teeth were appearing at the former site. I am sure no one would notice anything unusual about this little girl now except the goitre, which will remain in the future as a sword of Damocles waving threateningly over her at the period of puberty, pregnancy or the menopause.

In this regard one reads with curiosity the history of Miss M., aged 45, who presented herself with a marked exophthalmos of three weeks' duration, a large goitre, a pulse of 120 and a rapid tremor. The heart was much dilated, very irregular, with a loud mitral murmur. Miss M. says she had St. Vitus' dance at the ages of 8–10–13 and 15. She was taken from school at the 4th grade because of nervousness. At the age of 20 all her teeth were extracted because of Riggs' disease. Was her so-called chorea the incoördination of hyperthyroidism? If her teeth had been properly treated at the age of 8 would she have avoided this very dangerous form of thyroidism, and the exophthalmos of the menopause? I leave this for your conjectures.

REMARKS ON FOCAL INFECTION.

By Noble P. Barnes, M. D.,

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"Keeping up with the Joneses" is not a circumstance with keeping up in the profession, and the physician who would be other than a hindrance to scientific therapy must become familiar with the modern methods of recognizing and dealing with chronic infections and intoxications.

A few years ago we became aware that the large bowel harbored an organism, placed there by nature, to manufacture the toxins affecting old age and thus putting a crimp in longevity. Tonight we are here to have impressed upon our minds the importance and need of attention to the first part of the alimentary tract if we would live to be good looking old men and women.

Regardless of the shifting of ideas and torchbearers in either political or professional life there remains one law of practice that has stood the test of time and applies with greater force and significance in our today's treatment of focal infections and their resulting conditions, that is, when possible remove the cause, or where there is pus or diseased tissue clean it out.

In the past and much in the present the dentist views the extracted tooth in much the same spirit of regret that the physician views the remains of his departed patient. The extracted tooth

to the one and the defunct patient to the other may be of some interest but of no particular value. Every time the dentist pulls a tooth he draws just so much from his future revenue, as every time diseased tonsils or adenoids are removed the physician cuts out so much of his future income.

To the student of rational therapy there is no problem of greater interest than focal infections and their many clinical manifestations that are brought daily to his attention.

The result in the painstaking and systematic research in rounding up and exterminating these villain bands is even now of sufficient proportions to mark a new era in scientific medicine and surgery.

These foci are now regarded as real and important factors in the diagnosis and treatment of many disorders, some of which have been classed as incurable.

Carious teeth, alveolar disease, tonsils and adenoids, gallbladder, prostate and appendix, sinuses and mastoids, and many other nooks and corners, favorite breeding places and portals, have been found guilty of harboring these enemies to health and happiness.

The apprehending of these hiding places brings into employment every diagnostic method known to science.

The application of recently gained knowledge respecting the character and characteristics of micro-organisms and the practical adjustment to newer conditions of some of our old observations, furnishes us with additional means of not only recognizing these offenders but in locating their favorite haunts.

Different animals have a preference for different localities. Different families of the human race find health and comfort in entirely different environments. An individual away from his native country may fail in health only to be restored to normal by ecology.

Likewise we now have known facts regarding the habits of certain types of micro-organisms that give important evidence respecting their tissue affinities. The following are recognized facts respecting the tissue selection or predilection and habits of some of the well known micro-organisms:

Those of typhoid, dysentery and cholera select the digestive tract.

The gonococcus has a fondness for the genital mucosa and conjunctiva.

The Klebs-Löffler bacillus shows a preference for the tonsils.

The meningococcus for the meninges.

The pneumococcus for the respiratory tract, and the streptococcus of Herb for the parotid and testicle.

The staphylococcus is usually found in circumscribed infections, especially on the surface, while various strains of streptococci produce a great variety of infections and, more than any other

micro-organism, are capable of adjusting themselves to new surroundings by changes of a morphological character and becoming unassailable by the forces of the host.

The streptococcus and pneumococcus in some strains are characterized by infectiousness of a low grade of toxicity. The more virulent micro-organisms have a tendency to make their matrix or host less favorable for their growth, while some of low virulence as found in chronic foci make their habitat or soil more favorable for their existence.

The plasmodia hematozoon selects the red blood corpuscle, and the trichina spiralis the muscle.

Likewise toxins have a special selective affinity for certain tissues and produce their symptoms in consequence of such affinity. Tetanus toxins anchor to the motor ganglion and the virus of rabies to the central nervous system. Poliomyelitis anterior is also the result of a specific toxin or micro-organism having an affinity for the anterior horns of the cord.

In this connection it is of interest to note that some chemical substances localize unequally and thus give rise to certain diagnostic symptomatology, as, for example, the paralysis of the extensors in lead poisoning. Also that certain alkaloids, leucomains, ptomains and bacterial toxins may have similar selective effects upon the living organism.

Therefore a direct effect upon the cells of the body takes place whenever there exists between such cells and a toxic substance a mutual affinity. Again, tissue cells are sensitized against certain substances, generally as in the appearance of anaphylaxis, and locally by limited reaction.

Toxins may act upon a sensitized spot that has held previously injected toxin or its effect for a period of years. This is not unreasonable when we consider that some chemical substances will be fixed in the tissue for a lifetime as in the common tattoo.

Another interesting chapter recently developed is the acquired specificity for location of certain micro-organisms. Like birds that return to their northern home to nest, or like trout that leap to the source of the stream to spawn, so do these micro-organisms when injected into animals, race back to the location from which they were taken.

Rosenow (E. C. R., *A. M. A.*, Vol. LXV, No. 20) in an article, "Elective Localization of Streptococci," and in a later paper, "The Bacteriology and Experimental Production of Ovaritis" (*A. M. A.*, LXVI, No. 16), gives a comprehensive and convincing discourse on the affinity or tropism, that the streptococci, isolated from various diseased structure, have for the same organ or tissue when injected into animals.

In the animals that survived the injections many showed no other lesion than in the organ or tissue from which the streptococci had been taken. The streptococci strains employed by

Rosenow were similar in cultural and other respects but differed in degree of virulence. Those taken from the gallbladder being more pathogenetic than those taken from gastric ulcer while those from the appendices were least virulent. To use Rosenow's expression: "It appears that the cells of the tissue for which a given strain shows elective affinity take the bacteria out of the circulation as if by a magnet—absorption."

Beginning with the introduction of bacterial vaccines, when Koch recommended and used tuberculin, we have witnessed one reaction after another and have failed to take advantage of one practical application. Koch's tuberculin treatment was then a failure because of misapplication. Time after time was a focal smouldering ember fanned into an active and destructive inflammation because of an overdose of tuberculin.

This focal reaction has presented itself in almost every injection we have carefully observed. The flaring of a boil or carbuncle after administering a suitable vaccine, or the appearance of urethral discharge, frequent urination or strangury, after using gonorrheal vaccine, or the bursting forth of embryo pimples after injection of acne vaccine, are common observations.

Having these facts in mind, after prolonged treatment of a case of gonorrhoeal arthritis, with prostatic massage, irrigation and carefully measured doses of vaccine, in which there were days of encouragement, though the end result was nil, I decided to give the patient an unusual dose of the vaccine and thus incite an intense reaction in the joints, from which he always experienced a marked improvement. Within twenty-four hours my patient had a temperature of 103.5 degrees F., with all the symptoms of a general infection. Pain in the affected parts was severe. Interesting and suggestive was the stimulating of an unsuspected focal point of infection resulting in a most distressing epididymitis. The patient informed me at this time of a similar inflammation of the same structure during one of his outbreaks of unpleasantness over twenty years ago.

Here, then, was a focal point of infection I had overlooked.

Upon this suggestion of locating focal points of infection by obtaining a reaction following a larger than treatment dose of vaccine I have been working with a number of cases. Two of these I will report because of their unusual interest.

The first, a woman of 40, had been treated for gout and rheumatism and so-called "rheumatic gout," with everything from the salicylates and mineral waters to the baking oven and mud baths. She described her suffering as mostly "soft pains," stiffness, joint soreness and occasional severe joint pains. The heart sounds gave evidence of a previous endocarditis with resultant mitral insufficiency. Cultures made from her blood grew a streptococcus viridans. A vaccine made from this culture and given in an initial dose of 100,000,000 was followed by a moderately severe appendicitis.

The second case was a woman of 54 with chronic polyarthritis and who was a bed invalid for over a year. She had had pyorrhea alveolaris and her teeth had been removed while under treatment at the Johns Hopkins Hospital. When this case was referred to me she was taking from one to two grains of morphine daily and was considered hopeless. Three blood specimens were negative or no culture could be grown, either by aerobic or anaerobic media. Realizing that this form of infection is usually due to some strain of the streptococcus I injected 50,000,000 bacteria of a polyvalent streptococcic vaccine. In twenty-four hours she was in great distress. "I'm just as sore and painful as a big boil all over," was her remark. Blood specimens taken at this time grew a streptococcus viridans. An autogenous vaccine prepared and given in an initial dose of 100,000,000 was followed by pain and tenderness in the gallbladder region and the usual symptoms of cholecystitis.

The effect of a diagnostic dose of vaccine is both general and local. The symptoms of a general reaction are those akin to pathogenic invasion—chill, fever, headache, anorexia, general malaise and increased urination. The local effects lasting from one to several days and depending upon the size of the dose are characterized by pain and swelling of the affected parts, as joints and glands, increased urethral discharge, strangury or otorrhoea, as the case may be. In one instance the increased discharge in the postnasal cavity led to locating infections in ethmoidal sinuses.

Focal reactions are caused best, if not only, by injection of the killed, infecting micro-organism, and as some of these organisms have a wide range of affinity and adaptability the selection of the vaccine is very important.

Inasmuch as the morphology of micro-organisms is changed by environment and a predilection is shown for the organ or tissue in which they have been living, thus establishing an affinity between the host and guest, and inasmuch as these micro-organisms and tissues thus fixed are unassailable by vaccine made from other strains, why would it not be practicable in the absence of a suitable strain, to cultivate and acquire this favor by growing the micro-organism in a medium containing the extracts or substance of the organ we are going to treat?

Forssner (*Nord. Med. Ark.*, 1902) demonstrated that streptococci grown in kidney or "kidney extract acquire a special predilection for the kidney when injected intravenously." Why not apply this principle to the making of vaccine?

The streptococcus viridans, for instance, includes a variety of strains having special affinity for different tissues.

Vaccines and serums prepared with due regard for tropic conditions will from this point of view be the requirements of the future and no doubt many of our failures today will be successes tomorrow.

Dr. Dabney referred to the inter-relationship between diseases of the teeth and tonsils and goiter. He expressed the opinion that the etiological role of infected teeth is much more important so far as goiter is concerned than that played by tonsillar infection.

Dr. Verbrycke said that the frequency of focal infections complicating or preceding diseases of the stomach and intestines has been noted by gastroenterologists. Ulcer of the stomach and pyorrhea are so commonly found together that the dependence of the first on the second is almost an unavoidable conclusion.

Dr. Paul Johnson discussed the papers in general. He was impressed with the probable etiological rôle played by focal infections in certain nervous diseases.

Dr. Henry C. Thompson emphasized particularly the importance of radiographic study in dentistry, supplemented by careful examinations of the teeth and adjacent structures. There should always be a careful hunt for hidden infections.

Dr. Frank Hagner made general remarks on the broad subject. He said that infection of the seminal vesicles ranks second only to tooth infection as the source of metastatic invasions.

Dr. Hawley called attention to the many nervous affections that may be traced to impacted teeth as the cause. He advocated the proper development of the oral cavity in early life.

Dr. H. P. Cobey expressed the belief that the teeth, tonsils and genito-urinary tract act as foci from which metastatic infections spring, ranking in importance in the order named. He advocated the establishment of free dispensaries for general treatment of oral diseases ; not only for filling and extraction, but for instruction in the care of the mouth and teeth, supplemented by follow-up work as is done in medical dispensaries. He expressed the hope that the medical profession will assist in obtaining the necessary legislation and appropriations for such institutions. He believes that the proper care of the teeth should begin at the period of eruption.

THROMBOSIS OF THE CAVERNOUS SINUS.*

By Carl Henning, M. D.,

Washington, D. C.

This is a rare condition, in which the symptoms are chiefly ophthalmic, characterized by a sudden onset, alarming symptoms, first ocular, then general, and a fatal termination in forty-eight hours or so.

The free anastomosis of the veins of the nose, pharynx, mouth and face with the veins of the orbit and with the cavernous sinus itself, and the absence of valves, readily account for the occur-

* Read before the Medical Society March 1, 1916.

rence of this condition from some insignificant pustular or infective condition on the face, etc., and the extreme inaccessibility of the thrombosed sinus renders it almost impossible to properly treat the case.

Etiology.—The cause of infective thrombosis of the cavernous sinus may be either inflammation of the adjacent bone or brain coverings, *e. g.*, osteitis of the sphenoid, and basilar meningitis: also extension of a clot from one of the other venous sinuses communicating with the cavernous, viz: the lateral sinus, which is affected by extension of a mastoid abscess.

The causes residing outside of the skull are infection of the face, such as small boils, of the mouth, viz: tonsillitis, pharyngeal infections, tooth abscess, nasal accessory sinusitis, and infections of the hair follicles or of mucous glands, infections of the scalp, or in fact any pyogenous germ infection in a part the vein from which leads to or communicates with tributaries of the cavernous sinus.

Pathology.—The sinus shows a darkening of its wall, and is thickened, rough inside and out. Adherent to its wall, or completely occluding the lumen, is a clot, not red and friable as when fresh, but tough and gray or yellowish. Dependent upon the cause and upon the duration of the clotting, the surrounding tissues show changes. There may be a simple or an infective meningitis, or the whole process may be one abscess cavity. There will be oedema of the brain, more or less extensive, many small hemorrhages into the meninges or of the whole brain, probably infective clots in other sinuses, and pus in the spinal fluid.

The symptoms are those which would be caused by a plugging of the ophthalmic veins, and by an abscess in the locality of the cavernous sinus, with its pressure upon the neighboring structures and the extension of the purulent inflammation to those structures, together with the picture of a general systemic infection. Stenosis of the ophthalmic vein will cause oedema of the conjunctiva, lids, skin above the eye, and of the orbital tissues; this last resulting in exophthalmos. The eye grounds will show venous congestion with hemorrhages. From the orbital oedema the eye becomes fixed and cannot be moved in any direction. The conjunctiva becomes chemotic, and may swell enough to protrude as a second pair of lids. Pressure upon the nerves which pass in the affected sinus, the third, fourth and sixth motor, causes ocular paralysis, which will appear early if recognizable at all, for later the orbital oedema renders the eyeball fixed. Pressure upon the first branch of the fifth nerve causes severe pain in and over the eye. Extension of the inflammation to the nearby meninges gives the picture of a basilar meningitis, the irritative symptoms first, as headache and apprehension, later vomiting, delirium, various paralyses, coma and death. The general symptoms are those of a severe sepsis, high fever, with perhaps chills. So free is the an-

astomosis between the two cavernous sinuses that within a day or so the infection will spread to the opposite side, and the eye picture becomes double. To recapitulate, we see an exophthalmos, with signs of a severe congestion of the eyeball and conjunctiva, rapidly becoming an indurated mass, with a swollen upper lid overhanging the eye, and the eye fixed. The fever is high and the pain over the eye severe. Rapidly the other eye becomes involved and the patient goes into a coma, a terrifying picture owing to speed of onset and our knowledge of our helplessness.

The prognosis is very grave. The onset is so rapid that by the time we are certain of a diagnosis the case is practically dying.

In the *Boston Medical and Surgical Journal*, 1902, Dwight and Germain mention 184 published cases of cavernous sinus thrombosis, with 14 recoveries. Many cases have been reported since, and I have found in the last four years twelve published, with two recoveries. The average patient lived nine days after the onset of ocular symptoms.

Jackson (*Ophthalmology*, 1909) adds 28 reported cases to the above 184, and states that 25 per cent. of them are due to infection from the face.

Treatment.—If the diagnosis can be made early it may be possible, in cases due to nasal accessory sinus suppuration, to curette these sinuses and trust to the patient's vitality to overcome what may still be a toxic irritation rather than an actual septic clot in the venous sinus. H. J. Davis (*Proc. Royal Soc. Med.*, London, 1912–13) reports a case due to tonsillitis, with infection by way of the facial vein through its anastomosis with the frontal, in which 5 drops of Liquor Ammon. Fort. every 2 hours seemed greatly to inhibit clotting. The case, however, died. For the rest supportive and symptomatic treatment, as in septicemia, is all we can do.

Snell, in *Trans. Amer. Ophthal. Society*, 1913, reported a case much benefitted by stock anti-streptococcic vaccine, and hence recommended that vaccines be tried.

Operation through the orbit, after exenteration of its contents, is recommended by Devinger of Munich (*Zeitschrift für Ohrenheilkunde*, Vol. 64, 1912) and by Mosher of Boston (*Laryngoscope*, 1914). The latter's operation seems better, as he goes through thinner bone and has landmarks. But it seems better to me to do the Hartley-Krause operation as for the Gasserian ganglion, recommended by Ballance and Dwight. Dwight, in 1900, entered the sinus by the Gasserian ganglion route, and evacuated it, with prompt relief of a double exophthalmos, but the patient died a few hours later. The operation for septic thrombosis of the lateral sinus, found not infrequently in ear disease, is well established, not difficult to perform, and is wonderfully efficacious. Of course, cases of cavernous sinus thrombosis which are dependent upon an extension from a thrombosed lateral sinus due to ear

disease must be operated from the direction of the lateral sinus, as well, perhaps, as by the Gasserian ganglion route.

Dighton reports a case in the *Practitioner* (London), 1913, of one-sided cavernous sinus thrombosis from extension from a thrombosed lateral sinus due to mastoiditis. The jugular vein was thrombosed to below the clavicle. He excised the jugular from the clavicle up to the tip of the mastoid. The thrombosed lateral sinus was exposed to within an inch of the torcular Herophili. By curetting and irrigating he finally cleared the clot from the lateral sinus, the irrigating fluid at last flowing freely from the open end of the jugular vein at the tip of the mastoid. This case recovered. The surgeon states that in all probability the irrigating fluid rushing past the opening in the jugular bulb of the inferior petrosal sinus aspirated the infective clot from the cavernous sinus.

These cases are so rare that a surgeon seldom sees two or three in a lifetime. Most of them are by extension of a clot from a thrombosed lateral sinus, consequently the otologists report the cases. But a few cases, as is mine, are due to an infection from the face or nose, with resultant septic clot in the ophthalmic vein, thence extending backward into the cavernous sinus. Naturally this class of cases will have a greater mortality, owing to the entire absence of premonitory symptoms and the fact that the patient may be moribund at the time diagnosis is certain.

Case.—Recently Dr. C. A. Pfender asked me to see with him a gentleman, aged 36, who for a few days had had a headache over the left eye. The last day the ache had been severe, and at noon there was some exophthalmos. At 6 P. M., when I saw him with Dr. Pfender, there was a noticeable bulging of the eye, with beginning conjunctival oedema, double vision above and below the horizontal, due to the patient's ability to move the eye but little up or down; but lateral movements were normal. The optic nerve head showed a blurring of its edges, and the veins of the retina were a trifle larger than those of the right eye. The right eye seemed normal in every way. Temperature at that time 104, and on the previous day normal. Examination and irrigation of the nasal accessory sinuses revealed a moderately swollen middle turbinate on the left side, and some blood-stained clumps of muco-pus. That evening Dr. Pfender took several x-rays of the head, and conveyed the patient to the Episcopal Hospital. Hourly nasal irrigations were ordered, with hot applications to the eyes. Morphia sulphate one-eighth grain was given for the pain, hypodermically. Patient slept some during the night. I saw him at 9 A. M. next day, when I found the exophthalmos markedly increased; the conjunctiva so oedematous that it overlapped the cornea like a second pair of lids, and protruded from between the swollen and closed lids of the eye. The patient was unable to open the eye or move it in the slightest. The right

eye showed exactly the same picture. The nurse said that the condition in the right eye began about 3 A. M., eight hours after I had found that eye entirely normal. Temperature 104.6, and patient able to reply to questions. Said his headache was nearly gone. By noon the temperature was higher, and the patient talked but little and was with difficulty understood, though he nodded replies to some questions as though he understood them. Dr. Seibert took some photographs at this time. Dr. Nichols found a leucocytosis of 24,000 about 10 A. M. Dr. Bryan under ether curretted the ethmoid and sphenoid nasal sinuses, finding a quantity of bloody muco-pus. By 5 P. M. patient was stuporous. Dr. Hough did a lumbar puncture at 7 P. M., and found the spinal fluid under great pressure and filled with pus cells, roughly estimated at 40,000 per m.m. Polymorphonuclear leucocytes predominated, many red cells changed and normal. He could find no encapsulated diplococci. Axillary temperature 106.8. Patient died at 10 P. M.

In June, 1915, this patient had had an infected hand, slow to heal, hand and forearm swollen. Later a few ear furuncles appeared, easily cured. Two days before I saw him he had a small boil on the left ala of the nose, which he himself expressed. The infection was carried to the veins about the eye, thence back to the ophthalmic vein and to the cavernous sinus, with death three days after the nasal boil was opened.

A post mortem examination was made at the Episcopal Eye, Ear and Throat Hospital, under much difficulty, November 7, by Dr. D. S. Lamb, assisted by Dr. Schreiber. The body was that of a man, well developed and muscular; his height 6 feet one inch; weight about 190 pounds. There was a post mortem discoloration of the dependent parts of the body. The eyes protruded; profuse subconjunctival hemorrhage with ptosis of lids. There was no hemorrhage or other exudate in the orbit. Thrombi in right ophthalmic vein; left not examined. Upper and back part of scalp conjested. Sinuses of dura mater generally contained dark fluid blood; soft dark clots in left lateral sinus. Small subdural hemorrhage on right half of cribriform plate of ethmoid bone. Vessels of pia mater generally engorged. Many subpial hemorrhages. In places fibrino-purulent exudate under pia mater, especially on the left insula and adjacent opercula.

A microscopical examination by Major E. R. Whitmore, Med. Corps, U. S. A., at the Army Medical School, showed engorgement of vessels, an exudate of fibrin, red blood cells and mono- and polymorpho-nuclear round cells. In the pons Varolii were small hemorrhages.

A bacteriological examination of exudate was made by Dr. J. B. Nichols, who reported the presence of streptococcus, and doubtfully of staphylococcus; no bacteria in sphenoidal sinus.

Dr. Butler had been much interested in the case report and in the synopsis of the literature on the subject. He had been much impressed by the extreme rarity of the condition; he had seen thousands of eye cases, but only recently had he seen a case simulating this. The case he referred to was that of a colored boy of 14 years, who came into Garfield Hospital February 23, with a history of persistent, severe headache for the preceding ten days. On admission his temperature was 103; there was exophthalmos, chemosis of conjunctiva and delirium. Dr. Wells had seen the boy with him, and they had considered sphenoidal cell infection as the most likely cause of the condition. Thrombosis of cavernous sinus had been ruled out on account of the long duration of the illness, but since Dr. Henning had shown that such cases may last that long, Dr. Butler thought that the boy undoubtedly had that condition. The patient died, but unfortunately no autopsy was allowed. Dr. Butler expressed the opinion that some effort should be made to bring it about that reception and treatment in a charity hospital should be conditioned on the privilege of autopsy in case of death.

Dr. W. P. Carr suggested that those cases of cavernous sinus thrombosis which last a comparatively long time probably originate as infection and thrombosis in some other sinus, with ultimate extension to the cavernous sinus; from this point death very rapidly ensues. When the thrombosis originates in the cavernous sinus the patient dies very promptly. He cited a case of this complication which occurred as the terminal event in an extensive infection of the cheek.

Dr. Pfender said that little could be done toward diagnosing such a condition by x-rays; a clot throws no shadow. The x-ray examinations were made to determine whether disease was present in any of the bony sinuses. He described the technic for examining the sphenoidal cells and demonstrated the plates from this case.

Dr. Henning thanked Dr. Lamb for presenting the notes of the autopsy, which had been performed under very unsatisfactory conditions. The literature contains a number of cases of twenty days' duration after the development of eye symptoms. They all, however, ultimately die.

POOR DAD.—"Every one in our family is some kind of animal," said Jimmie to the amazed preacher.

"Why, you shouldn't say that!" the good man exclaimed.

"Well," said Jimmie, "mother's a dear, the baby is mother's little lamb, I'm the kid, and dad's the goat."—*Western Druggist.*

A HISTORY OF BODYSNATCHING.*

By Frank Baker, M. D.,

Washington, D. C.

Dr. Llewellin Eliot discussed the paper as follows:

Bodysnatching, resurrecting, night doctors was a pastime in which I was deeply interested and at one time engaged. There were pleasures and fascinations and excitements and risks attending it that were not found in any other phase of the study of medicine; but the passage of the Anatomy Act, in April, 1902, put a partial stop to the game; I say a partial stop, for I believe that bodysnatching still continues, although to a limited extent and for the benefit of a select few.

Medical history records the names of many renowned and respected men who were compelled to steal bodies for legitimate purposes. In 1814 William Cheselden was reprimanded, and no one knew the secrets of the resurrection men better than Sir Astley Cooper.

As far back as 1540 a law was enacted in England allowing the Company of Barbers and Surgeons to have yearly the bodies of four criminals to dissect. The Warburton Anatomy Act in 1832 put a stop to the systematic bodysnatching.

In the early days bodysnatchers were men of the lowest type, murderers, criminals, desperate fellows, who did not hesitate a moment to take any sort of advantage of their opponents; theirs was a business of bread and butter.

I shall not discuss the history of bodysnatching in the earliest days of the game—Dr. Baker has done that—but will take up the game in modern times, and what I shall say will take us back a great many years; some things I shall draw from tradition, others will be gathered from experience.

We of the present day call bodysnatching a nefarious trade, that bummers, outcasts, derelicts only will engage in, but let me tell you there was never a greater injustice done to a legitimate business; for while there is honor among thieves, there were honor, bravery, generosity and friendship between rival demonstrators. In illustration of this, one night rival demonstrators met in a burying ground, out for the same body, and although strong personal friends they came nearly to shovel blows; when, however, the one proved his rights by priority of arrival, the other waived his claim to the stiff and assisted in the snatching. Another night, rivals scouted about a burying ground to get a body each had located during the funeral services earlier in the day; each party heard the other; each had visions of police

* Read at a joint meeting of the Medical Society and Medical History Club, Washington, May 17, 1916. Dr. Baker's MSS. has not been received for publication.

officers and station houses, and they sneaked out of the grounds; but in about an hour they returned by different paths; the first arrival was given all the assistance that time would permit.

My father was a bodysnatcher; he was one by reason of his duties as Demonstrator, afterwards Professor of Anatomy. In 1844 he was under Dr. Thomas Miller, Professor of Anatomy in the Columbian Medical College, and he continued until 1849, when he became Professor of Anatomy in the Georgetown Medical Department. In 1861 he was transferred to the Chair of Surgery. Although the duties of bodysnatching were given to another he remained the friend and protector of the legitimate bodysnatcher until his death.

In the early days men went armed and were ready to call "Hands up!" "Which will you take?" that is, a drink or a fight.

In 1856 one of the prominent practitioners of the city had a sister die; he feared the resurrection men, so he begged that her body be left undisturbed.

When the Columbian Medical College was located in the old jail, the Demonstrator gently and quietly and carefully lifted the body of a brother Mason from its final resting place, and promptly entered it in the student class of anatomy. In some manner suspicion was aroused; the Lodge ordered an investigation. The grave was reopened; the committee found the clothing and other belongings in the coffin, but the brother had left for parts unknown. The chairman of the committee visited the Demonstrator and requested permission to make a search of the college; this permission was freely granted. Immediately afterwards the Demonstrator hurried to the college, had a section of the flooring taken up, the body placed, and the flooring replaced. The committee arrived; they were assured most positively that they would not find the body; they searched into every place, but failed to find the body. They left, the flooring was again removed and the body carried to the dissecting table.

The keenest piece of body stealing that ever occurred in this city happened as follows:

A man had died of some peculiar disease; both medical colleges wanted the body and the Superintendent of Washington Asylum knew it. He swore a mighty swear that neither should have it, and in order to carry out his swear had the body brought from the dead house and placed in his back office. Now, the dead house was a secure place, with windows barred, door locked and chained, almost impossible of burglarious entrance; the body would have been safe there. He thought not. Shortly after dark two students called to spend the evening, for he was a good fellow; in time more came down to see him. He felt complimented, and about ten o'clock went to the kitchen to order supper and other things prepared for his guests. At twelve o'clock the party broke up. But, while he was seeing to the

supper the body was lowered from the window into the arms of waiting students and carried away. Our old friend felt jubilant over his success and went to bed a happy and a contented man, but one can imagine his surprise and "what a difference in the morning."

Selden W. Crow got into trouble about 1859 and he was unable to make good after that. Sylvester went so far that he had to give up or get caught.

George A. Christian was a clerk in a Government office; he associated himself with a bad gang—Percy Brown and his sister Maude; Workhouse Kate and Margaret Harrison. They did a big and a profitable business. Away out on East Capitol Street, near the old Lincoln Hospital, this gang had a shanty, where they soon accumulated a great quantity of clothing, shrouds, and other graveyard things. It was a security storage until Christian suggested the medical college at 10th and E Streets as a better place for shipment. The suggestion was, in part, adopted. Christian would inject and pack the bodies in whiskey barrels at the college, roll these barrels up in front of the Army Medical Museum, where the express company would call for them; Christian was always on hand to pay charges and direct the shipments; in this way the company did not suspect the fraud. The price of bodies fluctuated with the demand and the weather. When the demand was great it was a common thing to charge one hundred dollars for a good subject; when the market became glutted the average price was forty dollars. Quite a number of Demonstrators paid a hundred dollars. Shipments were mostly to the South.

Christian was a man of medium build, athletic, strong-muscled, of great endurance, and a good worker in the cause; his hair and beard were black. His clothing was always that taken from the grave; he, therefore, was usually well dressed. His frequent raids and his sullenness when drinking were the causes of his undoing.

On the night of December 13, 1873, he was stopped in the street by Officer McGlue; with Christian were Margaret Harrison (white) and Charles Green (colored). They had been to Holmead's Cemetery and had a body. All hands were partially intoxicated; Christian refused to answer the questions McGlue put to him; he would give no explanation whatever, so the party was taken to the 4th precinct station house. The charges were: Carrying concealed weapons, disorderly conduct, suspicious character, and every imaginable thing. While they were at the station the Lieutenant sent Sergeant Kneas and Officer Hawkins to Holmead's, and there they found the body of Thomas Fletcher, that had been buried only the night before, dug up and enclosed in a sack. In the search of the prisoners there were found some chemicals, a syringe for injecting, a diary, Colt's service revolvers, and a card of membership to the Young Men's Christian Association made out in the name of George A. Christian.

The papers gave a full account of the arrest; the District Attorney charged Christian with robbing grave yards of dead bodies and disposing of them to medical colleges in different places throughout the country. Dr. George A. Otis recommended Christian's immediate dishonorable discharge from the Government service. This was approved and Christian was out of two jobs.

The diary captured showed much incriminating evidence. This diary was turned over to the Chief of Police and by him it was given to one of his Surgeons; it was censored and portions were given out for publication in the city papers. Many names of those who had been out with Christian were, for good and sufficient reasons, omitted. In the Police Court, Judge Snell imposed on him a fine of $1,000.00 and one year in jail.

Among the entries were the admission, that he had engaged in the exhuming of the body of Beau Hickman and in its horrible mutilation, and that he had put the face and scalp near the steps of the main entrance of the Capitol Building; this piece of business was done in April, 1873, and created considerable excitement; he also made an entry that he had put the scalp and face of another body on one of the gate-posts of the same grounds.

I shall give a few extracts from his record:

January 3d, 1873. "On the 3d, B and C went out and got two cadavers tonight."

September 2d; he gives the names of several places visited during the night and then winds up with:—"It was a lovely moonlight night, and everything went off smoothly."

September 18th. "Called on Dr. ——— this morning, and he promised to let Dr. Schleimer and I furnish his college with material this winter at $15 each—we to inject and remove it."

Christian had his own private troubles, for on "September 19. Jay Cooke & Co. suspended yesterday, and I was unfortunate enough to have some money in their hands. Went up to see about it today, but everything is closed and no information can be had."

September 20. "Got a permit from the Board of Health today to bury material from the dissecting-room of college."

Christian also confessed to being an abortionist in the following: October 4th. "Gave 'M' tincture of gentian compound to produce an abortion." A few days later he records his success.

Business was quite lively in December; work was heavy. Monday, December 1. Visited Potter's field; shipped two subjects in whiskey barrels to Virginia."

December 4th. "Visited Holmead's and Young Men's grounds and failed."

December 6. "Visited Ebenezer, Kate and I, and got subject."

December. "Visited Holmead's and Young Men's grounds and failed."

It would require too much time to give more extracts from this diary; enough has been quoted to allow one to form an idea of the amount of work done.

One of Christian's workers was appointed a ward physician, and the death rate of that ward soared very high for the good of the cause.

Percy Brown was a big fellow, a good fighter, and of a very ugly disposition when he was drinking. Maude Pratt was Percy's sister, or his common law wife, it was never known which; she was a very devil; she married a disreputable dentist just about the time he was dying. Maude was chief mourner at funerals; heavily veiled and decked out in the most sombre looking dress, weeping as though her heart were broken, Maude would accompany the family to the cemetery; she always wanted a few flowers from the coffin of the dead friend; she would by some unfortunate accident drop these flowers near the grave and then report progress. The position of the flowers usually showed the right grave. The last time I saw Maude she was but a shadow of her former self; she was a wreck and nearly blind.

There was a negro preacher; he taught salvation and repentance to the limit on Sundays, buried the dead of his congregation; but the strain on his nervous system was so great that he was compelled to let off steam by stealing the bodies he so faithfully buried.

The Superintendent of the Washington Asylum went out one night to catch the bodysnatchers. He had malice in his heart, but cowardice in his actions. He pinned on his shield, buckled on his revolver and club; then he lighted his lantern, and then, like old Diogenes, went in search of an honest man; that is, one who quietly give himself up for trespass on the Potter's Field. He might just as well have staid in doors.

Jansen appeared on the scene. Jansen was a dirty fellow, as dirty men go; he was bold, boastful, revengeful. He stole many bodies, kept a record of his doings, kept all letters he received, and showed them to anyone interested sufficiently to read them. I have had a big batch of them in my possession for weeks at a time.

In January, 1881, Charlie Shaw beat his sister so badly that she died under my care. Suspicion pointed to Charlie, and while he denied all knowledge of the affair, he was arrested after her death, convicted of her murder March 29, 1882, and executed by Warden Crocker Friday, January 19, 1883. During his stay in the jail he several times attempted suicide, and once set afire the bed of his cell mate. Shaw's body was not in the ground three hours before Jansen was digging for it. He took it to a medical college; he claimed he was not sufficiently well paid for it and

swore to get even. At three o'clock on Sunday morning, the 22d, he was arrested while trying to break in the college door. Collateral was forfeited. During the night of the 22d he engaged a hackman, Johnny Mack, at the old Baltimore and Ohio Depot; he gave Johnny several drinks and they went to the college, got the body and proceeded to Columbian Medical College to sell it; he failed; they then went to Howard University, but Dr. Shadd would have nothing to do with Jansen. Daylight was at hand and Jansen was in a fix as to what to do with the body; he quickly solved the problem so far as he was concerned by making his "get away," leaving poor Johnny in the lurch. More drunk than sober, Johnny drove to the Seventh Street station house, the legs and feet of Shaw dangling out of the hack window. Mack would not give Jansen away, he was willing to take his medicine, but Jansen told on himself while he was in John Shea's saloon down on Maryland Avenue near Third Street. He was boasting of what he had done "last night" and on several other nights; this was heard by a colored man from the alley in the rear of Shea's; he told the police officer on the beat, and Jansen was soon under arrest. When convicted, his remark was that he had "got into trouble for the stiff of a damned nigger." The court gave him one year in jail.

The body of Shaw was carried to the dead house at the Asylum, and Superintendent ——— swore by all that was good and holy that no one would ever see Shaw again. The weather was bitter cold, the ground too hard for grave digging, so quite a number of coffins accumulated in the dead house. However, a few days afterward the right box was found, opened and the head stolen for a keepsake; I had the skull in my possession a number of years when it disappeared. There was ice in the coffin and in the skull. The skull was taken to the Hospital office, placed in a box lined with plaster of paris, buried in sawdust, then the top of the box securely nailed on; this box was not opened for six months, and during the entire time there was no odor; at the time of opening it, the skin fell away, and the bones were perfectly clean and white.

The grave dug for Shaw about two weeks after his receipt at the dead house was shelved at the bottom and the coffin pushed under the shelf.

Beale came along, but he soon became scared of the work; was afraid of the ghosts of the jail.

No cemetery was held sacred by the old-time bodysnatcher.

I shall not occupy your time nor try your patience much longer, but I will say I do not believe any law will ever stop bodysnatching, and that what Sir Astley Cooper said before a committee of the House of Commons: "There is no person, let his situation in life be what it may, whom, if I were disposed to dissect, I could not obtain. The law only enhances the price, and does not prevent exhumation," is only too true.

I shall not tell how to properly snatch a body, as it might end disastrously for some of the younger men, and then again "lead us not into temptation."

I would suggest the reading of Southey's poem, "The Surgeon's Warning," and Thomas Hood's "Mary's Ghost."

CASE OF TRAUMATIC FLAT FOOT CURED BY OPERATION.*

By W. P. Carr, M. D., F. A. C. S.,

Washington, D. C.

J. E. V., white, male, age 37, electrician; fell from a scaffold in March, 1910, crushing both heels. I first saw him two years afterwards. He walked with difficulty with the aid of two canes; was unable to work and suffered much pain in both feet if he walked more than a few hundred yards or stood on his feet. He was wearing steel arches in both shoes, made from plaster casts of his feet, and thought they helped him a little but not much. He was very anxious to have something radical done to relieve him.

On examination I found both feet unusually long and slender, weak and perfectly flat; when he stood there was absolutely no arch, and even when sitting, with no weight on his feet, a ruler laid along the sole touched every point from heel to toe. April 3, 1912, I operated. A curved incision three inches long was made behind the outer malleolus down to the os calcis, which was exposed on one side only by slight dissection, and divided between the ankle joint and attachment of the tendo Achilles, with my modified Wyeth's bone saw. I know no other instrument with which this could be easily done.

The divided posterior part of the os calcis was easily slipped downward three-fourths inch on the right foot, but on the left this could not be done until the tendo Achilles had been obliquely divided and lengthened. This was readily done through the original incision. The sawn bones were nailed in their new positions through a half inch incision over the heel, with wire nails 2½ inches long.

Improvement in the shape of the foot was at once noted. A very good arch was formed and a firm heel. Both feet were put up in plaster casts in position to increase the arch as much as possible. Primary union resulted. The casts were removed in four weeks. In six weeks the patient was allowed to walk and could do it better than before the operation. He continued to improve.

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* Reported, and patient presented, to the Medical Society April 12, 1916.

Five months later the nails were removed under local anesthesia, by Dr. H. S. Lewis, because there was some tenderness caused by the pressure of the shoes on the ends of the nails. Some time later, the patient living two miles from his place of work, walked each way daily.

In December, 1912, he told me that he had walked the two miles, carrying a heavy load without discomfort. This was a traumatic case, but there would hardly be a weaker or more unfavorable foot for the operation, and there has been no sign of relapse after four years. I should now like to try it on a bad case of gradually-acquired *pes planus*. I think that the giving of a firm projecting heel, which takes the weight and pressure off the plantar nerves and other tissues, is the chief cause of the relief, and that this would apply equally to gradually-acquired cases. The operation is simple, leaves no scar on the weight-bearing surface of the foot, and can cause no trouble if infection is excluded.

[Recess taken to examine patient. The heels were found firm, arches good and scars scarcely perceptible.]

Dr. Snyder said that Dr. Carr was to be congratulated on this original operation; Dr. Snyder had never heard of any similar surgical procedure. The result in the case called for high commendation.

Dr. Carr felt rather proud of the case. The man had come to his office hobbling with the aid of two canes, but now walks and works comfortably. Both patient and surgeon are pleased with the result.

INDICANURIA; STUDY OF 100 CONSECUTIVE CASES.—ABSTRACT.*

By J. Russell Verbrycke, Jr., M. D.,

Washington, D. C.

Indican as a fairly accurate index of auto-intoxication is of very great importance. The analysis of the hundred cases illustrates points which have been noted by the author in several hundred other cases.

In 24 patients the condition was probably primary, in 69 it was clearly secondary, while in 7 this point could not be determined. In the series were represented 26 cases of ulcer, 23 of colitis or pericolitis, 12 of visceroptosis, 9 of appendiceal dyspepsia, 5 of cholecystitis and 2 of cancer. These lesions when present

*Read before the joint meeting of the Medical Society of the District of Columbia and the Baltimore Medical Society, April 7, 1916, in Baltimore, Md.

were usually the primary condition. Pyorrhoea was coexistent in 25 per cent.

Diseases of the liver were not accompanied by indicanuria more often than other gastro-intestinal troubles. Stasis, where there is increased production of indican or a damaged mucosa, will markedly increase the degree of indicanuria but is not an essential factor, as 29 of the patients had regular daily movements without taking medicine. Further, constipation in the absence of other factors does not produce indicanuria.

Albumin was found in 55 per cent. of the series and was probably secondary rather than an etiologic factor since it often cleared up after the cessation of the indicanuria.

The average free acidity was 40 and total acidity 54, normal figures. X-ray study frequently showed ileo-cecal regurgitation, which condition is almost constantly accompanied by high grade auto-intoxication.

The importance of indican as an index of putrefaction is evidenced by the most significant parallelism between the indicanuria and the symptoms. Of the 100 patients there were only 4 who had none of the toxic symptoms; 11 per cent. had but one symptom, while 85 per cent. showed from 2 symptoms to the whole syndrome.

Indicanuria may be continuous or intermittent, persistent or transitory. Several characteristics of the toxins are shown, first, rapid action and rapid elimination and, second, the possibility of a tolerance being established. Objectively the pulse was found slightly quickened, a slight anemia was produced, and there was a decided lowering of blood pressure although the ultimate effect of the toxemia may be to produce arteriosclerosis.

[Case histories were presented to illustrate various points.]

CASES ILLUSTRATING THE FAULTY TREATMENT OF SUPERFICIAL MALIGNANCY. ABSTRACT.*

By H. H. Hazen, M. D.,

Washington, D. C.

During the past three years I have been consulted by thirty-two private patients for malignant conditions of either the skin or mucous membrane of the mouth. Of this number only six consulted me for early untreated stages of cancer.

The faulty handling of the other cases may be divided into three categories: first, neglect on the part of the patient; second, faulty diagnosis on the part of the physician, and third, faulty treatment by either physicians or quacks.

* Reported to the Medical Society April 12, 1916.

In nine instances patients had neglected themselves without seeking medical advice, several patients having waited for from six to seven years.

Six instances of cancer had been wrongly diagnosed by the attending physicians, syphilis and lupus having been stated to be the nature of the lesions in the majority of instances.

Twelve cases were either improperly or insufficiently treated after a correct diagnosis was made. In several instances more than one faulty method of treatment was employed. Four cases had been treated by caustics. Five had been operated upon. One had been treated by fulguration, four by small divided doses of the Roentgen rays and four by radium. Special interest attaches to these last four, for all were treated by exponents of the method who have plenty of the material at their disposal. In all instances the growths were made much worse, and in three operable lesions were made practically inoperable.

In view of the very bad way in which three of these patients were handled one must naturally wonder whether some of the so-called radium experts are not about on a par with those advocating and advertising various nostrums, both local and internal, and one must receive with skepticism the reports of cures of deep malignant conditions and various uterine disturbances.

Dr. Balloch said that the paper was a severe arraignment of the profession at large; 32 cases had been cited and in only 6 of these did it appear that the fatal delay was the fault of the patient. On the part of the patient delay is due to a fear that the knife will be recommended. Dr. Balloch had learned that the x-ray is an agent that will cause complete disappearance of early lesions with little scarring. Deep, massive, x-ray therapy is not yet on so sure a footing, but temporary results are very striking.

Caustics will cure early cases, but only by extensive destruction of tissue; the knife or the cautery had better be used. The main question is, why are so many cases unrecognized? We should set our house in order as to this. We do not have full faith in the precancerous nature of lesions like keratoses, moles and warts; we should regard all such growths with suspicion. As to injudicious operations, he preferred to say nothing.

At first we hoped for much from radium, but it has not been found very efficacious and it does not act deeply. He had seen the four radium cases reported by Dr. Hazen; this agent had accomplished not the slightest good, on the contrary distinct harm had been done, if not by the agent itself, by the loss of time occasioned by its use. The future of inoperable cases of cancer lies in massive doses of penetrating x-rays; remarkable results may be obtained by irradiation from the Coolidge tube. These rays are much more penetrating than radium. The point

to be especially emphasized is that it is up to us to exercise more care in diagnosing and treating cancer cases.

Dr. Abbe was glad that Dr. Balloch had left us with the impression that there remains something to be done with our cancer cases. Dr. Hazen had left the impression that all our old therapeutic friends are useless. The fact is that the appropriate operation, the appropriate caustic, the appropriate x-ray therapy, etc., all have their proper uses and are not to be discarded. He inquired what Dr. Hazen regards as the proper substitute for the long used methods?

Dr. Simpson congratulated Dr. Hazen on the paper and the illustrations. Dr. Simpson had himself read the first paper before this Society on the use of carbon dioxid snow, and he said then, and believes now, that it should not be used in the treatment of epithelioma. The technic of caustic therapy in competent hands may be so developed as to produce excellent results; the relative good results of different methods of treatment of skin cancer depends in large measure on the personal equation of the operator. Successful use of x-ray depends upon the measured dose.

Dr. W. P. Carr said that there is general disappointment in radium and to a certain extent in x-ray treatment of cancer; but there is good in both. We are going to find out that there are different kinds of cancers with different responsiveness to various forms of treatment. Kelly reports that he has some definite cures of melanotic sarcoma brought about by radium. Dr. Carr had seen some so-called x-ray cures here; they remained well about a year, when the cancer returned and developed very rapidly. If a cancer cured by x-ray recurs, additional x-ray treatment makes matters worse. The best and safest treatment of skin cancers is excision; when taken early, the condition does not recur. We ought not to consider cancer inoperable because it encroaches on the eye; it is better to remove the eye. Different men have different ideas as to the inoperability of cancer; we cannot tell whether cancer is inoperable until we try. He condemned the use of caustics, except pyrogallic acid in certain small superficial growths. Complete excision is the certain cure for small circumscribed lesions. Refusal on the part of patients is not apt to be encountered if the situation is carefully explained to them. He was unalterably opposed to the practice of taking sections for diagnosis.

Dr. Pfender had enjoyed the paper. The discussion had twisted into a debate as to whether x-ray or operative treatment is best; his own experience has been that certain cases require certain treatments; he had had perfect results with x-ray, with fulguration, with galvano-cautery; but he always advises extirpation, with the knife. He prefers, however, first x-ray treatment, then the knife, then x-rays again. There are a few cases that radium will help where x-rays do no good.

Dr. Simpson asked how many cases of cancer of the tongue have the surgeons saved? At the Skin and Cancer Hospital he had seen none at all saved.

Dr. Jack said that 75 per cent. of cases of tongue-cancer can be saved if properly operated upon early; this means radical, block dissection of half the tongue after ligation of the external carotid artery. Dr. Hazen's paper was especially a plea for the early radical removal of suspicious lesions.

Dr. Hazen had said what he did about carbon dioxid snow because of a recent statement by a Philadelphia man about the curative properties of the agent in epithelioma, claiming to have cured 95 superficial cancers with it. Dr. Hazen had not used caustics in his own work and does not propose to use them. He is now using as first choice, excision by the electro-cautery, and is working up a proper technic of x-ray therapy, using a hard tube and filtering through aluminum. Personally he prefers excision by the electro-cautery. We do not yet know what the final results of x-ray treatment may be; he expressed the hope that a technic may be developed which will equal excision.

SYMPOSIUM ON INFANT MORTALITY.

PAPERS READ BEFORE THE MEDICAL SOCIETY, MAY 24, 1916.

INFANT MORTALITY WITH REFERENCE TO POST-NATAL CAUSES AND THEIR PREVENTION.

By E. P. Copeland, M. D.,

Washington, D. C.

I will preface my remarks by assuming that, for the purposes of this discussion, the word infancy is used in the generally accepted sense of the word, to refer to the first two years of life. In any campaign against mortality, the first and most important step is the possession of accurate vital statistics, without which we find ourselves in much the same position as would the builder without the architect's plans. I desire especially to direct attention to the need for greater accuracy in the execution of the death certificate, for I am convinced that more exact information of this kind would materially alter our present conception of facts pertinent to this symposium. I believe that it would reveal that much of the mortality at present attributable to gastro-intestinal disease belongs in reality to lues and tuberculosis, that it would enable us to differentiate primary and secondary respiratory disease in its relation to mortality, and finally that it would

give us a better idea of the seriousness of measles and whooping cough. So far as statistics may be accepted they show us that about 22 per cent. of the total mortality is in infants under one year and about 6 per cent. in infants between one and two. Approximately 25 per cent. of this high mortality of the first year occurs in the first month of life, the period during which the infant is adapting itself to its environment. It is difficult if not impossible during this first month to clearly differentiate prenatal, natal and postnatal factors in the production of infant mortality.

So far as definite postnatal causes are concerned, the most reliable statistics available show us that acute gastro-intestinal disease stands first, with a record of about 30 per cent., and acute respiratory disease second with something like 19 per cent.

The importance of gastro-intestinal disease has long been recognized and it has received much well-merited advertising in all activities directed to the reduction of infant mortality, in consequence of which the percentage of deaths from this cause has been materially reduced. Disorders of the gastro-intestinal tract may be divided grossly into two groups:

1. Disorders due to infection.
2. Disorders due to faulty digestion.

The first group is important as representing the results of infection of the infant with specific organisms producing disease of a specific character.

The second group—disorders of digestion—presents a problem almost as serious in its immediate effects, of vastly greater importance in its remote effects, and from the very nature of things far more difficult of solution. Disorders in this group come about as the result either of variable tolerance on the part of the infant for artificial food, or the faulty adaptation of such food to the infant's digestive capacity. The immediate effects of such faults express themselves in digestive disturbances of all grades of severity from simple dyspepsia to profound food intoxication, both with or without significant alteration in the intestinal flora. The remote effects are those of scurvy, rickets, chronic indigestion and marasmus, all of which, in addition to their direct mortality, act as predisposing causes in the production of mortality with which they are not always associated in the certificate of death.

The last decade has witnessed a material decrease in the death rate from gastro-intestinal disease. This has been brought about, and is susceptible of further decrease by a more widespread dissemination of knowledge of infant nutrition, both in the profession and among the laity. Through the publicity given the milk question in recent years, and the enactment of laws looking to the improvement of the milk supply, disorders of the gastro-intestinal tract of an infectious nature have become less and

less common. The complex nature of the questions involved in the disorders of digestion makes their solution somewhat more difficult. Much has been done, however, and much more can be done, by continued efforts in the education of the public, and I repeat, the physician, by extending the field of the various welfare activities, including an efficient social service. Among the better classes the physician can accomplish much by a more serious attention to the possibilities of prophylactic medicine.

Second in importance among the postnatal causes of infant mortality is respiratory disease. It is significant that while the mortality from causes previously mentioned has been decreasing, that of respiratory disease has been increasing. The diseases in this class which invite serious consideration are bronchitis and broncho-pneumonia. As I have previously indicated, it is difficult to get an exact idea of just what proportion of the mortality included in respiratory disease properly belongs there. It is my conception that only such conditions as are primary should be so classified. Broncho-pneumonia during the first two years of life is largely a primary pneumonia, attended, as is well known, with a very high mortality. It is likewise the terminal factor in many other disorders of this period, notably the acute infections.

Now it is, in my judgment, essential that these primary diseases of the respiratory system be distinguished from those of a secondary nature, not that they are the more deadly, but that we may get at the facts, namely, that much of the mortality now attributed to respiratory disease should be laid at the door of other disease in which bronchitis and pneumonia have been only terminal.

In any attempt to lessen infant mortality, from whatever cause, we are more concerned with prevention than cure. The proper line of procedure in the prevention of respiratory diseases in the infant is best indicated by a consideration of the etiology of these disorders, both predisposing and exciting. They may be briefly summed up in lowered resistance and the opportunity for infection. The infant should be maintained at the highest possible state of resistance. The preceding speakers have shown us what is being done to insure the infant a proper heritage, and, being well born, the infant should be provided with such an environment as will best conserve and build up its resistance to infection. This environment may be said to include, first of all, normal feeding, sanitary housing and proper clothing, bathing and exercise, and, secondly, an isolation from all known sources of infection. Time does not permit a detailed exposition of all of the factors which may well be included in the term infant hygiene. I must say a word, in passing, on the subject of fresh air and cold air, the discussion of which is so rife at the present time. All are agreed, I believe, as to the merits of fresh air,

but we must distinguish between fresh air and exposure, and endeavor to meet the needs of the individual infant as is now done in the matter of its food.

As contributors to the mortality of the second year, more especially the latter half, the acute infectious diseases, measles, whooping cough and diphtheria, command some attention. Much of the mortality of these diseases is written into the statistics of respiratory disease. A campaign of publicity advertising the seriousness of these lightly regarded infections, excepting diphtheria, would do much in protecting infants from such exposure.

Finally a word on the subject of tuberculosis. The special susceptibility of the infant to infection of whatever nature is too well appreciated to need further emphasis. The mortality from this disease is, I am satisfied, higher than statistics would lead us to believe. I have previously referred to the tuberculosis that masquerades as marasmus and chronic digestive disorder. Now practically all of this tuberculous disease is due to contact infection, and apart from the mortality in infancy, much latent infection is carried over to manifest itself and contribute to the mortality of this malady in later years.

I have endeavored to touch upon what I conceive to be the most important causes, postnatal, in the production of infant mortality. I quite well appreciate that there are many that have not been mentioned. It is interesting to note that the first year is the only period in life in which the mortality increases during the summer months, but I feel sure that its part is more contributory than otherwise. The entire problem may, I feel sure, be embraced in a better solution of the problems of Infant nutrition and Infant hygiene.

INSTITUTIONAL MORTALITY AMONG INFANTS.

By H. H. Donnally, A. M., M. D.,

Washington, D. C.

The first institution into which the infant may be brought is the lying-in hospital. From the standpoint of infant mortality this may or may not be an advantage, the matter being judged by a comparison of the conditions at the hospital with those which the infant would encounter if the mother had remained outside for her confinement. It is probable that the vast majority of babies born in hospitals have better living conditions than if they had been born outside. On the other hand, the infant born to the normal mother is better off in the average well-to-do home than at the hospital. The main reason that this is so is because of the greatly reduced opportunity for *infection of the infant*

in the clean, quiet, isolated, well-appointed nursery of the home, in contrast to the noisy, well-filled hospital nursery in which opportunity for contact infection from nurses and other babies, who are of necessity present, to say nothing of visitors and others who go into the nursery in spite of rules to the contrary, is much greater.

Eternal vigilance in matters of asepsis about lying-in hospitals is the price of escape from disastrous havoc due to infections among the babies as well as the mothers. The principal infections are sepsis in some form, and the respiratory. Except in unusual cases of stupidity and carelessness among the workers in the hospital, sepsis plays but a small part in the infantile mortality of the best lying-in hospitals, and may be regarded as accidental and exceptional, being only 3.6 per cent. of the 387 total deaths at the Sloane Maternity Hospital among 10,000 consecutive births studied by Holt and Babbitt.*

On the other hand, 17 per cent. or 66 of these 387 deaths of new-born infants were due to pneumonia, which is twice as many as were caused by the accidents of labor, while such accidents caused "an astonishingly small fraction of the infant mortality" as one would expect in a modern obstetric hospital. In nearly all of the cases of pneumonia, catarrhal symptoms preceded the pneumonia. How illuminating it would be to know the proportion of the 10,000 consecutive births which acquired these upper air passage infections, the forerunners of pneumonia, bronchitis, otitis media, etc. There were several distinct house epidemics of pneumonia, so that it ranked second to congenital weakness alone as cause of death. The authors state that "In obstetric hospitals, as in all institutions where infants are brought together, respiratory infections must therefore be reckoned among the greatest dangers to which these small inmates are exposed. More liberal accommodations for babies must be furnished than those provided in most of our obstetric hospitals and greater care to prevent crowding must be exercised. It is also imperative that those infants who are suffering from even the milder types of infection should be promptly and completely isolated from the healthy, and that nurses also with infectious colds should be temporarily relieved from duty."

Turning now to another class of institutions which the infant may enter at a very early age, one may speak of the institutions for foundlings. In these institutions the little inmates fall into two chief classes, the actual foundling picked up on the doorstep or elsewhere, where it had been abandoned, and the much larger class, infants surrendered to the institution by the mother who voluntarily renounces all further authority over and responsibility for it. In New York in 1913 among 1,738 institution infants

*Trans. Am. Asso. for Study and Prevention of Infant Mortality, 1914.

under a year, 59 or 3.4 per cent. were true foundlings, while 840 or 50.1 per cent. were deliberately surrendered to the institutions. Of the true foundlings 64 per cent. died during the first year of life; of the surrendered babies 59 per cent. died before completing their first year. Of all these deaths, 44.3 per cent. occurred in less than one month and 68.7 per cent. in less than two months. These are not exceptional figures, and similar ones could be presented from many parts of the world to show that infants in foundlings' institutions have had a mortality of from 30 to 75 per cent. even in the last few years, while if one goes far enough back death rates as high as 98 per cent. are to be found. In other words, admitting a young infant to a foundling institution has meant its almost certain death, and even in recent years that its chances of living were but one or two in three.

The causes of this tremendous mortality in institutions for the permanent care of infants have been nutritional disturbances, infections and absence of sufficient mothering or individualizing in the care and needs of the baby. It is exceedingly difficult to make a young infant thrive in an institution without breast milk,—often impossible,—no matter how expert in infant feeding the physician-in-charge. All of these infants have rickets if they are fortunate enough to survive long enough for it to develop, but infantile atrophy usually has closed the scene before that time. To these difficulties of nutrition are to be added with compounded force all of the respiratory, gastrointestinal and infectious diseases responsible as ordinary postnatal causes of infant mortality. The impersonal care which these malnourished infants receive, while not so bad from one point of view, is certainly far short of maternal.

The remedies for these conditions consist in deliberate efforts to reproduce real home conditions for the infants who have thus been deprived of their birthright. The method generally in vogue in Europe, where the preservation of life in times of peace has been so highly developed, has been to have a small, temporary receiving institution with nurses and medical officers, where the infant is kept only until such time as a private home may be found for it. It is then placed in a family, but still remains under the care of the medical and nursing organization. This method has recently been strongly advocated by Chapin and others, and has been tried in various parts of America with great benefit and reduction of mortality among the infants. Thus the Massachusetts Babies' Hospital provided during a recent year boarding homes under medical and nursing supervision for 816 infants of whom but 86 died (10.5 per cent.), a mortality rate considerably lower than that of all classes of infants in the country at large. Similar work is being done in New York, Philadelphia, Baltimore and California.

Our own city of Washington has one of the best institutions for foundlings anywhere, the Washington Home for Foundlings, with a mortality below the general infant mortality rate. Here the work is along the same line, but done in the institution, which is run on the plan of a large family; breast milk is usually provided in some measure, coupled with great care and individualization in the feeding and other attention the baby receives, isolation of infections, and much mothering by painstaking nurses. There is a warm room for delicate babies, and outdoor sleeping porches for those robust enough to profit by them. A summer home near Bethesda, Maryland, is occupied for three or four months of the year. Those who have reached the age of three years and over have had for the past year the benefits of a Montessori School established in the institution with the greatest benefit to the children. Working with the most meagre financial resources, this institution is doing high grade work, losing only from five to ten babies in a year among 100 to 140 under its care. (May 1, 1915, to May 1, 1916, number of children admitted and remaining over from previous year 141, among whom there were only five deaths.)

The third and only remaining institution for infants which I have to consider is the children's hospital. Here the baby is received only when its condition requires hospital treatment and it is cared for only temporarily. Indeed, it has been well proven that the longer its stay in the hospital the more sure is the baby to acquire one or more infections to which all institution babies are subjected, chiefly of the respiratory tract, but also including the contagious diseases of childhood, tuberculosis, vaginitis, sepsis, sore throats, and so on, plus the nutritional and gastro-intestinal disturbances to which the baby in the hospital is markedly disposed.

The modern children's hospital meets these conditions by admitting to its wards children who have first passed through a period of observation in an individual unit or cubicle, where they are kept apart with all articles used for them being individual, including thermometers, and the nurses and physicians taking especial precautions to prevent spread of infection from one child to another. Each child on entrance is given a tuberculin test; a Schick test with diphtheria antitoxin when indicated; a Wassermann test; and in the case of girls a vaginal smear is made.

Once in the wards after this preliminary survey, prolonged or short according to the individual needs, the child may be at any time isolated in a ward cubicle, on presentation of a suspicious sign or symptom of infection, for which a constant watch is kept. Nurses with colds, sore throats, etc., are relieved from duty, as spreaders of disease. Utmost precautions are taken to prevent

contact infections of any kind. Breast milk is supplied from wet-nurses housed in the hospital. Visitors are greatly restricted, parents only, and wear caps and gowns over their ordinary clothing when in the hospital.

The great principles involved in the care of infants, reduced to the simplest possible form are:

(1) Avoidance of nutritional disturbances by supplying breast milk at least during the first few months.

(2) Prevention of infection.

(3) Supplying fresh air and maintaining good hygiene.

The manager of the baby incubators on the pier at Atlantic City has so well caught and applied these principles that a physician who visits there may readily see how small a part the incubator plays in maintaining the baby's life, although in it the infant is kept warm, and through it a constant supply of fresh air is conducted, the easiest of the conditions to fill. The babies are fed exclusively on breast milk supplied by well-paid wet-nurses. They are looked after exclusively by the best graduate nurses for babies the manager has been able to find, and all handling of the babies is done by these trained nurses in a room immaculately clean, with all articles sterile. No one is permitted to enter this room but nurses and babies of the plant, visitors observing through a plate-glass window. This is a shrewd application of medical knowledge in commerce, which could well be emulated by institutions caring for young babies toward the reduction of their unnatural, high mortalities.

THE INFLUENCE OF THE INFANT-WELFARE CENTER IN THE PREVENTION AND REDUCTION OF INFANT MORTALITY.

By Joseph S. Wall, M. D.,

Washington, D. C.

There has occurred in the last few years throughout the entire country a material reduction in the infant death rate. During this same period there has been developing a country-wide interest in organized effort toward reaching the infant population through the establishment of various baby-saving agencies, the foremost of these being the units formerly called "milk stations," but now mostly known as "baby stations," "well-baby clinics," "infant-welfare centers," "prophylactic centers," "health centers," and the like, the emphasis being placed in these modern designations upon the preponderance of hygienic prevention as compared to all other methods of attack.

The springing into existence of so many agencies bringing pressure upon the factors responsible for infant disease and death has undoubtedly been the most potent factor in directly causing the falling death-rate observed in both urban and rural districts. There has been, however, such an awakening in recent years to the value of prevention in all matters pertaining to health, whether infant health or adult health, that one should in all fairness concede to this quickened public conscience a part in the mortality reduction that has occurred, independent of any specialized efforts on behalf of the infants of tender years. One can point to no more striking argument for "preparedness," the byword of the hour, than to the results which have obtained in matters of public and personal health in which the exploitation of "prevention," a term almost parallel with preparedness, has resulted in gratifying attrition against morbidity and mortality.

The welfare-center has passed through an interesting period of evolution so that the present-day conception of what it should represent differs from that entertained several years ago.

The first effort to reach the baby through a central agency was that of Budin, of Paris, who established a system of follow-up work among the mothers of the maternity hospital after their discharge, and called such centers the "gouttes de lait" and his conferences, the "consultations de nourrissons." The first attempts in the United States to reach the infant mortality problems through such units were those of Koplik who, in 1889, established a "milk station" at the Eastern Dispensary, now the Good Samaritan Hospital, in New York City.

For many years these central agencies were called "milk-stations" and had for their object the dispensing of pure milk to their patrons. With this of necessity went much in the form of advice and instruction, but the educational features of such centers were subordinate to the milk distributing function. In fact, this milk-giving factor reached its maximum importance during the régime of the Nathan Straus laboratories, one of which was for a time maintained in this city.

It is passing strange that it took several years to point out the fact that the crux of the whole situation was completely lost in the maintenance of "milk stations" for the prevention of infant disease and death. The horse was out of the stable when the doors were locked, or, as a matter of fact, had never been in. The appeal to the prospective patron of the milk station was the provender of pure milk with which to *artificially feed* her baby. The nursing mother, the greatest and largest factor recognized in baby-saving efforts, was completely left out of the scheme, for she was not in need of the "bait" of a bottle of milk which formed the magnet of attraction at the station.

Maternal nursing is now the slogan of the well-baby clinic and

has become so prominent a matter in the educational propaganda that the place of milk giving has either assumed a position of minor importance or has in most instances been entirely eliminated. Two factors are perhaps mostly concerned in the decline and fall of the "milk station," even three might be mentioned. First, the demonstration that fixed formulae, of which there usually did not exceed four, were unfitted for the proper feeding of each and every infant who applied. The fitting of the infant to the stock formula was frequently accomplished by mixing two of the set formulas, much after the manner of the drug-store applicant who, failing to find stock No. 8 of a favorite advertised specific, proceeded to satisfy his cravings for medication by taking a combined dosage of No. 3 and No. 5.

The second result demonstrating the lessening importance of milk distribution, was the education of the mothers as to the value and possibilities of breast feeding which did away with the necessity for an artificial food. Thirdly—and the influence of the welfare centers has contributed in no small way to this result—the public has been awakened to the value of clean, pure milk and, as a result in most cities possessing a civic conscience, the milk supply is so guarded and graded that the baby can be provided with its nourishment from the dealer whose rating and standing is known by the mother.

Lastly, in this history of evolution, there have been developed prenatal agencies for extending competent supervision to the mother before her baby is born, this latter movement reaching its foremost development along these lines in work of Dr. Chas. E. Ziegler, of Pittsburgh.

The work of the present-day welfare center is almost wholly educational. In one city, Rochester, N. Y., the conferences are held in the school houses, so clearly does the municipality recognize the educational features of the propaganda. The right of an infant and the value to it in its subsequent years of being well born, of being granted a healthy birthdom, is the foundation of modern welfare effort.

The subsequent post-natal instruction relates to the education of the mother in all the lines of hygiene relating especially to babyhood, food, clothing, fresh air, housing, etc.

The development of the ideal welfare effort is well set forth in the address of Homer Folks, President of the American Association for Study and Prevention of Infant Mortality, who says: "The outstanding fact as to the underlying purpose of the infant mortality movement is that our work is *preventive* rather than *remedial*. At the outset we were thinking of sick babies and of curing them; then we were purifying the milk supply to keep them from getting ill; then we were encouraging maternal nursing as the all-important factor, and finally we are looking to prenatal

education as leading the way to all the subsequent necessary steps. We had hospitals and dispensaries for the care of the sick long before we had health departments to prevent sickness. The hospitals and dispensaries dealt with the few; the health departments deal with the multitude; so, in a very few years the infant welfare movement has changed from dealing with the few for curative purposes, to deal with the multitude for preventive purposes."

The space allotted for these papers forbids a detailed description of the workings of a typical welfare center or well-baby clinic, such as are maintained in Washington by the Diet Kitchen Association. Suffice it to say that such a center usually consists of two rooms rented in a congested or centrally located neighborhood so as to be accessible; the reception room receives the mother with her infant, and here the baby is stripped and weighed by the nurse. The mother then enters the consulting room for her conference with the physician, where the baby is inspected, its feeding problems considered, advice and instruction imparted, and data of importance noted on a chart. The mother returns each week for her consultation during the first two years of the baby's life. Each center has its staff of physicians and a nurse, a large part of whose duties consists in visiting the homes of the mothers and imparting educational guidance directly therein. Prenatal conferences are usually held once a fortnight for each mother, where examinations, measurements, advice, etc., are given throughout the whole of her pregnancy, if she seeks out the center in the early months. The far-reaching influence of both prenatal and postnatal investigation and correction and the details of administering these functions must be omitted for lack of space.

There are at present approximately 500 infant welfare stations maintained throughout the towns and cities of the country. They cannot be developed to any great degree in rural districts, and other methods of attack have been adopted to reach those who reside outside of communities.

It is interesting to note that the welfare center is usually first established through private philanthropy, but in an increasing number of cities is being absorbed and administered by the health departments. For example, in New York City, the Department of Child Hygiene maintains 50 out of the 75 stations now operating. The maintenance of such centers is unquestionably the duty and function of the civic and state health agencies, for not only is the conservation of infant life a matter of public health and of national necessity, but the beginnings of public health measures should beyond question start with the beginning of life itself; nor is there a surer means of extending the influences which make for public and personal hygiene than the entering wedge

of infant welfare, the open sesame to the home, and the factor in family life which most accurately reflects *all* public problems, whether they be food, air-space, lighting, clothing, the tuberculosis soil, or what not.

It is gratifying to note that infant welfare problems have emerged from the domain of purely municipal control into state supervision, as attested by the establishment some time since in the State of New York of a Department of Child Hygiene. The director of this department, in a letter under date of May 19th (Dr. H. L. K. Shaw), writes: "You will be interested to know that Massachusetts is about to establish a Division of Child Hygiene, so that the departments of health now having such divisions in operation are, in the order of establishment, New York, Kansas, Ohio, New Jersey, and Massachusetts."

The results, insofar as the reduction of infant death-rates are concerned, of the introduction of the infant welfare center, or of the application of the methods elucidated through such centers in the control of rural conditions, are readily demonstrable. One can use as an index the statistical returns from almost any community as a measure of these results, and, as a matter of fact, the infant death-rate not only represents less loss of life among the babies of a community but reflects in a totally unmeasured degree the betterment in health, in sanitary surroundings, in comfort and happiness of its inhabitants, for which statistics are unavailable as well as inadequate.

From the reports of the constituent societies at a meeting of the American Association for Study and Prevention of Infant Mortality, held in November, 1915, the following statistics registering falling death rates are available from communities where infant welfare centers are being maintained.

Table of Deaths per 1,000 Births.

New Haven, Conn., 1910, 260; 1914, 160.
Washington, D. C., 1910, 152; 1914, 100.
South Bend, Ind., 1910, 135; 1914, 95.
Louisville, Ky., 1910, 148; 1914, 121.
Boston, Mass., 1910, 127; 1914, 103.
Holyoke, Mass., 1910, 142; 1914, 114.
Springfield, Mass., 1910, 123; 1914, 96.
Duluth, Minn., 1910, 223; 1914, 187.
Minneapolis, Minn., 1910, 96; 1914, 83.
Montclair, N. J., 1910, 111; 1914, 84.
New York City, 1910, 125; 1914, 94.6.
Philadelphia, Pa., 1910, 138; 1914, 121.
Providence, R. I., 1910, 145; 1914, 115.

The death rate among the welfare-center babies is always markedly less than that of the city rate for infants under one year, but this must be interpreted with the fact in mind that such a large number of deaths occur within the first few days of life before the babies can be brought under the influence of the centers and that a comparison favorable to the centers must be tempered with the realization that deaths in the first few hours or days naturally raise the figures of the city death rate beyond those under postnatal supervision. Nevertheless, an accurate survey has been made in Boston between supervised station babies as compared to the mortality among the average Boston babies taking into account every circumstance to make this comparison just and equitable. The result has been to show among the station babies a mortality of 25 per cent. less than that for the babies of the city.

In 1908 the infant death rate of New York City was 144 per thousand living births; in 1911 it had been reduced to 120 per thousand living births; in 1913 to 102 per thousand, and in 1914 it was 94 per thousand. To quote from Dr. H. L. K. Shaw, Director of the State Division of Child Hygiene: "This decrease has not been accidental, but has been brought about by hard work on the part of the Director, Dr. S. Josephine Baker, and an able corps of assistants, supported to an unusual degree by the coöperation of private agencies, increasing the number and efficiency of the infant welfare stations, educating the mothers and correlating the activities of all agencies engaged in infant welfare work."

Further he states: "Wherever these [the infant welfare stations] have been in successful operation the infant mortality has been materially reduced. The Public Health Commission, appointed by the Governor, which drafted the present Public Health Law, recommended that 'each city with a population in excess of 10,000 and having an industrial population, should have one infant welfare station, and larger cities with an industrial population should have one such station for approximately each 20,000 inhabitants.'"

It would seem, therefore, that the welfare stations have been potent agencies in reducing sickness and death among the babies of each community where they are in operation, and that their importance is so great to the municipality, the State and the Nation, that in the near future such agencies will probably become a part of the health departments and very justly will assume a position of importance in the sanitary policing of every community.

While the word "policing" is used in its broadest sense, it is a sign of the times, perhaps, to read in a report by Dr. Alan Brown, of Toronto, that "A duplicate of this slip (birth return)

is mailed to the City Hall, on receipt of which a nurse is sent to visit the home of that particular patient, and give instructions, and further emphasize the importance of bringing her child to the well-baby clinic in her district. If the patients refuse to bring their children to the clinics, and are not attended by a physician, they are summoned to the Juvenile Court!"

Dr. Frank Leech had listened with pleasure to all the papers and especially to those relating to pediatrics. As to the natal period of the infant's life, he thought the obstetrician and the pediatrist should work in harmony unless the obstetrician has fitted himself for pediatric work. One of the most important factors in the baby's welfare is the care of the diet. The longer feeding interval is one of the most important advances in pediatric science. Even premature infants may do better on the four-hour feeding interval. It is very simple to feed premature infants if breast milk can be obtained: this may be drawn off and poured into the stomach through a catheter. He made a plea for the wider application of the four-hour interval. The artificial feeding problem is not solved yet, but pure milk is the fundamental need. Pasteurization is probably a necessary disadvantage connected with the milk supply of cities; certainly we are not yet ready to do without this precaution.

Dr. Roy asked if he had understood aright the statement by Dr. Donnally that the mortality in foundling asylum hospitals is 40 per cent. or 50 per cent., or even higher? If this is so, and the community in which they exist wants these foundlings to live, such institutions should be prosecuted.

Dr. Woodward said that one-third of all infants that die in the first weeks of life die of prenatal causes; only 7 per cent. die from feeding causes; 15 per cent. die of respiratory diseases. Wonderful results have followed modern efforts to prevent digestive diseases among infants. But as many infants die today in the first day of life as died twenty-five years ago; the obstetricians need to answer why this is so. There is much prejudice against foundling asylums; but such institutions do not always get fair statistical treatment, and, moreover, they have to deal with specially disadvantageous material. There may be merit in the tendency to favor the distribution of foundlings in boarding homes among private families. He felt that the welfare station is of the greatest importance and he was sorry that such stations cannot be supported by public funds in this city. He called attention to factors of error in the statistics of infant mortality and quoted District of Columbia statistics for a number of years back. An interesting feature of the statistics is that stillbirths are more numerous among hospital deliveries than among deliveries at home.

Dr. Kober expressed his deep appreciation of the excellent symposium; there had been none better in this or in any other country. The reasoning was sound and the conclusions incontrovertible. His interest was especially aroused because of his own contributions to this subject. When we consider the difference in mortality among breast-fed infants and those fed artificially, the only conclusion possible is that the morbific factor is introduced with the food. The statistics show what can be accomplished in the field of preventive medicine, and what has been demonstrated as possible in the control of diseases of the digestive tract of infants must be sought for in the control of the still highly fatal diseases of the respiratory tract. Everything leads to the necessity of socializing medicine; the State must look out for the prevention of disease.

Dr. Chappell had enjoyed the papers which were all of a high order of merit. He wished to call attention to what seemed to him an erroneous opinion; we all know that proper hygiene renders the individual more resistant to disease; but while nearly all the speakers claimed a decrease in the prevalence of nutritional diseases in infants, it appears that there has been no decrease of the other diseases. This is an anomaly that needs explanation; for other diseases should decrease *pari passu* with the decrease of nutritional diseases, unless some new factor enters and such a factor had not been mentioned.

Dr. Moran had not heard all of the first paper and asked to be pardoned for any repetition. He based his remarks on a study of 10,500 births at Columbia Hospital, in which the fetal mortality was 13 per cent. Prematurity, syphilis and toxemia caused 70 per cent. of these deaths; thus they were independent of labor. Birth accidents—forceps, placenta previa, eclampsia, etc.—caused 18 per cent. of the deaths. But 60 per cent. of the cases were admitted in labor; this was, therefore, an important factor in the fetal mortality from birth accidents, and this explains also the usual high institutional mortality from this cause. If there had been proper prenatal oversight much of this mortality might have been avoided. Obstetricians and hospitals should not be blamed for deaths due to prenatal causes; this is up to the family doctor.

Dr. Paul Johnson said that the bulk of prenatal care is, and will continue to be, up to the family practitioner; he must be both obstetrician and pediatrician. Fees are the difficulty; the doctor cannot afford to see expectant mothers and young infants without fees; the average family cannot afford to pay fees. The doctor ought to see all healthy babies at least once a month during the first year; perhaps he should give this service as part of his public duty. As to the hygiene of babyhood, overwarm dressing is an important factor of harm.

Dr. Lawson did not think it difficult to explain the unmodified infant mortality of the first days after birth which Dr. Woodward had intimated needed explanation by the obstetricians; it is due to prenatal causes and to accidents of labor; 20 per cent. to 25 per cent. of pauper births are syphilitic. There has been very general improvement in obstetric practice, but this does not change conditions of society.

Dr. Willson agreed with Dr. Leech in regard to the advantage of longer feeding intervals as a general proposition; too long intervals, however, interfere with lactation. Breast-fed babies do better on three-hour intervals; but he preferred four-hour intervals to two. He thought that the chances of the baby are better with the obstetrician than they would be in a case of difficult labor in the hands of a pediatrician; if the matter were made to work equally in both directions, perhaps the reciprocal relations of the obstetrician and the pediatrician might be quite satisfactorily established. He was not as optimistic as Dr. Lawson as to the general improvement of obstetric practice; certainly the general mortality rate of the infant at the time of labor is no better now than it was twenty-five years ago.

Dr. Wall said, in regard to Dr. Roy's inquiry about the mortality of foundling asylums, that institutions in Glasgow and Moscow, for example, in certain years, reported mortality rates of 100 per cent., but these were not *bona fide* foundlings. The great improvement in infant mortality from intestinal diseases is the monumental achievement of the infant welfare work of the past years.

SOME REMARKS ON THE DIAGNOSIS OF RENAL AND URETERAL CALCULI.—ABSTRACT.*

By H. A. Fowler, B. S., M. D.,

Washington, D. C.

Calculous disease is the most common surgical condition of the kidney and ureters. When for any reason a stone fails to pass naturally, its removal is demanded. The treatment is therefore purely surgical. The exacting present-day demands of renal surgery require that a complete and accurate diagnosis must be made preceding operative intervention in every case of suspected stone. A *complete* diagnosis should give us accurate information on the following points: the positive demonstration of a stone; its exact location in the kidney or ureter, as well as the number and size; the presence or absence of infection; to what extent,

*Read before the joint meeting of the Medical Society of the District of Columbia and the Baltimore City Medical Society, April 7, 1916, in Baltimore, Md.

if any, the affected organ has been damaged; and the condition of the opposite kidney. Accurate preoperative diagnosis reduces the necessity for extensive exploration at the time of the operation, which is both difficult and inaccurate and results in damage to the kidney tissue.

The diagnosis in general is based upon the subjective symptoms, together with the associated urinary changes, and is confirmed by the x-ray examination and instrumental exploration when necessary. While the diagnosis is easily and simply made in a large percentage of cases, the difficulties sometimes encountered are pronounced. The most frequent source of error lies in the atypical character of the symptoms. The typical renal colic attack so characteristic of renal and ureteral stone may be entirely wanting and the pain is referred to some other region or organ. The cases presenting atypical pain are divided by the author into three groups: (1) Pain is absent during the entire course of the disease, (2) pain is so slight as to attract little or no attention and may not be referred to the kidney at all, (3) the pain is definitely and persistently referred to some other organ or region of the body. In the latter case the kidney does not fall under suspicion and the true nature of the trouble is often overlooked. When such referred pain is located on the right side the appendix or gallbladder is suspected. Unnecessary operations upon these organs have been not infrequently performed. [Cases illustrating these three groups were briefly detailed.]

The importance of a routine examination of the urine in all cases cannot be too frequently emphasized. This is particularly true in cases with right-sided abdominal pain. In general it may be said that stone is associated with fresh red cells in the urine. However, as careful observers have reported the absence of blood on repeated examination in 12 to 14 per cent. of cases, we must avoid the error of assuming that the absence of blood negatives the presence of a stone in every case.

While roentgenography is the most valuable single means we have of making a diagnosis of stone, the percentage of error is considerable. The sources of error are twofold: (1) The failure to show a stone when one is present, (2) difficulties in the interpretation of shadows in the kidney area and along the course of the ureters. Experience shows that the error is greatest in stones in the ureter. A plea is made for the closest coöperation between surgeon and roentgenologist in the interpretation of all plates.

Finally attention is called to the value of the wax-tipped ureteral catheter in the diagnosis of stones in the ureter. This will at times give positive and definite information where the x-ray plate leaves one in doubt.

In Memoriam.

DR. HOBART SOUTHWORTH DYE.

Dr. Hobart Southworth Dye was born Jan. 17, 1848, at Bridgewater, Oneida County, N. Y. He received the degree of M. D. in 1876 from Columbian University, Washington, D. C. He began the practice of medicine in New Berlin, N. Y., May 3, 1876; was made a member of the Chenango County Medical Society in 1876 and was president of it in 1891–2. In May, 1893, Dr. Dye came to Washington and engaged in the practice of diseases of the eye, ear, nose and throat. His local affiliations were numerous and important. He was a member of the consulting board of Washington Asylum Hospital; Associate Surgeon at the Episcopal Eye, Ear and Throat Hospital; and Clinical Instructor in nose, throat and ear diseases at George Washington University. He was a member of the Medical Society of the District of Columbia, of the George Washington University Medical Society, and of the Society of Ophthalmologists and Otologists of Washington, of which he was president in 1906–7. He was also a member of the American Medical Association and of the American Laryngological, Rhinological and Otological Society. Doctor Dye died April 5, 1916.

**Whereas,* Dr. Hobart Southworth Dye, after a life of extreme usefulness, has in the fulness of age been called from us, and

Whereas, the Medical Society of the District of Columbia has by his death lost one who by his genial character and lovable disposition endeared himself to us all,

Therefore, be it resolved that a copy of this resolution be spread upon the minutes of this Society, and the Secretary be instructed to send a copy also to his relatives.

(Signed) O. A. M. McKimmie,
Charles W. Richardson,
Carl Henning,
Committee.

The Preparedness Parade.

Dr. J. A. Gannon sends the following letter:

To the Editor of the Washington Medical Annals.

Dear Sir: Will you kindly print in the Medical Annals the following explanation of why the Medical Society did not participate in the Preparedness Parade on June 14th?

*Adopted by the Medical Society, May 31, 1916.

On Friday, June 9th, the Medical Society decided to participate in the parade and appointed the following committee on arrangements: Dr. Gannon, Chairman; Dr. Davidson, Dr. Burke, Dr. Seibert, Dr. Gerry Morgan, and Dr. Macatee. The committee notified the Chairman of the Preparedness Parade Committee in writing of the intention of the Society to participate. On Sunday, June 11th, by special appointment, I met Chairman Gude and Secretary Columbus of the Preparedness Committee at the *Evening Star* Building. I stated to them that the physicians who proposed to march would probably be the only body taking part in the parade who would have other duties to perform on that day, and in consideration of this circumstance I requested that the committee allow us special favor.

I stated that we proposed to assemble at 12:30 at the Union Station Plaza and that I wanted their assurance that there would be no delay in our getting into the line of march. Chairman Gude stated that the committee expected 70,000 persons to take part in the parade and that it was the desire of the committee to have the physicians march in the 8th division with the clubs, lawyers and other professional men, and that they could not possibly reach this division by 12:30. Mr. Gude promised that if we would arrange to assemble at the Union Station Plaza at 2:30, and would notify his representative at the Peace Monument, that we were assembled, he would see to it that we were placed in the line without delay. It was calculated that 10,000 persons could march past a given point in one hour, and, provided they commenced the parade on time, the 70,000 marchers could not all start before 4:30. He stated that his committee could only favor us if we would agree to keep the fact that we were favored out of the newspapers, and advised me that any newspaper notice of the parade would not apply to the Medical Society.

As the members of the Society know, the parade was already over and the cars on the Avenue in operation at 2:30, when we assembled to march. The explanation of the miscalculation on the part of the Parade Committee appeared in the *Evening Star* of June 15th. The *Star* stated that the official count of the persons taking part in the parade was less than 36,000. The Medical Society Committee received no word of any change of plan up to the hour that the Medical Society assembled.

The committee takes this occasion to thank the members who assembled at the Union Station for their display of patriotism, generosity and loyalty to the Society.

Very truly,

J. A. Gannon,
Chairman Medical Society
Preparedness Parade Committee.

June 19, 1916.

Dr. J. A. Gannon,
Chairman, Medical Society Committee, Preparedness Parade,
1219 Conn. Ave., N. W., Washington, D. C.

My dear Doctor:—Pressure of business has prevented an earlier reply to your favor of June 14.

No one regrets more than I that the Medical Society did not take part in the parade. The parade was expedited beyond our dreams. When we suggested the hour that the physicians might form it was with a whole-hearted desire to save your distinguished colleagues as much inconvenience as possible.

That the parade went forward so rapidly was due to that same desire to give everyone that desired to participate the least physical strain possible.

I was more than delighted to know that the Medical Society of the District of Columbia would participate, and it is the one regret that I feel in the movement that the physicians did not get in.

Kindly convey this letter to your members with my most sincere assurance that no one regrets the circumstance more than I.

Sincerely yours,

Wm. F. Gude,
Chairman, etc.

PROCEEDINGS OF THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA.

Friday, April 7, 1916.—Joint meeting with the Baltimore City Medical Society, at the Medical Library, Baltimore, Md. About 100 members of the Washington Society attended. Dr. C. H. Jones, President of the Baltimore Society, and President E. Y. Davidson of the Washington Society, presided. Dr. Jones welcomed the Washington members and President Davidson expressed their appreciation of the invitation to Baltimore.

The following papers were read by Washington members:

Dr. J. R. Verbrycke; Indicanuria; an analysis of 100 cases; discussed. See page 254.

Dr. H. A. Fowler; Remarks on the diagnosis of renal and ureteral calculi; discussed by Drs. H. A. Kelly, Young and Hunter of Baltimore, and Fowler. See page 273.

Dr. J. D. Nichols; Pathologic and therapeutic bearings of the elimination of body heat.

The Societies adjourned and a supper was served by the Baltimore Society.

Wednesday, April 12.—President Davidson presided; about 75 members present.

The Treasurer reported receipts for March, $122.00; disbursements, $268.05.

The following appropriations were made: For postal cards for March, $61.27; for typewriting for Corresponding Secretary, $2.67; for publishing the ANNALS for March, $225.64.

The following deaths were announced and memorial committees appointed: Dr. E. C. C. Winter; committee, Drs. H. T. A. Lemon, R. T. Holden, G. R. Sorrell. Dr. R. L. Lynch; committee, Drs. J. J. Kinyoun, Frank Leech, W. C. Fowler. Dr. H. S. Dye; committee, Drs. O. A. M. McKimmie, C. W. Richardson, Carl Henning.

Dr. G. Wythe Cook, for the Executive Committee, reported the following recommendations, which were adopted:

1. That 100 reprints of the paper read by Mr. F. A. Fenning before the Society be furnished to Mr. Fenning with the compliments of the Society.

2. That the Society contribute $10.00 towards the defense fund of Dr. Malsbury, who was under indictment for publishing an article that the U. S. attorney regarded as "obscene literature."

Dr. Hunt, from the Program Committee, stated that members who should attend the projected smoker at the joint meeting with the Baltimore Medical Society, would be charged $2.50 each. The Society ordered that should there be any deficit, it should be met by this Society. A vote of thanks was given to Drs. Verbrycke, Fowler and Nichols for their papers read at the previous joint meeting.

Dr. Hagner called attention to the resolutions offered in the Senate by Senator Works of California, requiring Surgeon General Rupert Blue, of the Public Health Service, to resign from the Presidency of the American Medical Association, and suggested that the Society take some action. The matter was referred to the Executive Committee.

Dr. W. P. Carr reported a case of Traumatic flat foot cured by operation, and presented the patient. Discussed by Drs. Snyder and Carr. See page 253.

Dr. L. B. Thomson reported a case of Transit of a pin, 1⅜ inches long, through the gastro-intestinal tract of a thirteen-months old baby boy. The pin, which was black, with a globular head, was shown. The ingress of the pin occurred as the result of the ignorance of one of those typical girlish young mothers, living in a northwest suburb, who had not as yet accustomed herself to watch a baby when it had just learned to walk, and naturally one evening three weeks ago he walked to a table and pulled off a work basket, and scattered its contents on the floor. Soon the mother observed the child choking. Thinking that it had placed a button in its mouth she inverted it and slapped its back but could not find any button in its mouth. With this ordeal the choking ceased, and the mother, fully believing that no foreign

body had been swallowed, gave the matter no further concern, but resolved to watch the stools. On the eleventh day afterwards the pin appeared at the anus imbedded in fecal matter, and up to date no untoward symptom had occurred.

Dr. L. Eliot said that sometimes foreign bodies pass through the alimentary tube very rapidly, sometimes very slowly. With a pin going head foremost he would not anticipate any trouble. But he remembered a child that swallowed a broken needle; the same night it complained of intense pain in the chest; Dr. Eliot was called at 9 P. M. and saw projecting at the 6th costal cartilage the point of the needle; it was extracted without any serious after symptoms.

Dr. S. S. Adams said that small children may be thrown into convulsions by swallowing very small foreign bodies; others may pass very large articles without trouble. Dr. A. F. A. King had reported a case in which an open safety pin had been passed successfully. Dr. Adams himself had removed from the rectums of children under his care pennies, whistles, etc. Parents will often state that they have *heard* the whistles while *in transit*. He recounted cases to show that often the article which is supposed to have been swallowed may be found by a careful search of the room.

Dr. Masterson spoke of the case of a young woman with a form of mental depression, who, whenever she has an opportunity, swallows needles, pins, etc. She passes these without difficulty.

Dr. E. L. Morgan called attention to a specimen in the Medical Museum of a heart with an old brass pin sticking in it.

Dr. W. P. Carr said that it is amazing what children will swallow; he had seen pennies, thimbles, dried bumble bees and other junk in the material vomited by children; he had had great difficulty in keeping a young son from swallowing cigar butts. Not all children get off so easily, however.

Dr. Isabel H. Lamb said that once while dressing a chicken she had found a beautifully encysted pin in the liver substance of the fowl; it had been well taken care of by natural processes.

Dr. H. A. Fowler said that, illustrative of the value of rough and ready first aid methods, he was passing through the entrance hall of an apartment house and encountered a hysterical mother with a child which was making frantic efforts to swallow something; with his index finger he was able to hook up and remove a safety pin from the youngster's throat.

Dr. E. W. Burch exhibited a hairpin which had been swallowed on the 9th instant and passed on the 11th; there were no symptoms.

Dr. Paul Johnson reported the case of a man he had seen in the country who had a facial paralysis, said to have resulted from a severe coughing attack; during one such paroxysm of cough

he had expelled a hard rubber tobacco-pipe stem which he had no recollection of swallowing.

Dr. L. B. Thomson had little to add. He had instructed the mother of the child to feed it liberally after it had swallowed the pin ; perhaps this contributed to its smooth passage.

Dr. H. H. Hazen read the paper of the evening, Faulty treatment of skin cancers ; illustrated by lantern slides. Discussed by Drs. Balloch, Abbe, Simpson, W. P. Carr, Pfender, Jack and Hazen. See page 255.

Wednesday, April 19 —Joint meeting with the Dental Society of the District of Columbia. President Davidson presided jointly with Dr, Fenton Bradford, President of the Dental Society. President Davidson welcomed the members of the Dental Society, and President Bradford expressed the thanks of the latter for the invitation to the joint meeting.

The following papers were read :

Dr. C. M. Gearhart, D.D. S. ; What constitutes a dental diagnosis?

Dr. A. B. Crane, D.D. S. ; What we can do to prevent oral sepsis.

Dr. E. H. Reede ; The relation of oral sepsis to goiter.

Dr. N. P. Barnes ; Remarks on focal sepsis.

The papers were discussed as a group by Drs. Dabney, Verbrycke, Paul Johnson and Hagner, and by Drs. Hawley and Cobey of the Dental Society. See page 223 *et seq.*

Wednesday, April 26.—President Davidson presided ; about 60 members present.

The Chair appointed the following committee on the centennial of the Society : Dr. J. B. Nichols, chairman ; Drs. D. S. Lamb, G. Wythe Cook, Roy, W. P. Carr, Kober, Boswell, Louise Tayler-Jones, Macatee, S. S. Adams, C. W. Richardson, Hunt, A. B. Hooe, J. B. Thomas and Hagner.

An appropiation of $15.75 was made for reprints of the list of members and of the paper by Mr. Fenning.

The Society ordered that the meeting of May 10 should be omitted because the Congress of American Physicians and Surgeons would be in session in Washington at that time.

A letter from the library of the Surgeon General's Office in regard to the publication of the Index Catalog, was referred to the Executive Committee.

Dr. M. B. Fischer reported a case of Epidemic cerebro-spinal meningitis with recovery. Discussed by Drs. Hough, Frank Leech, S. S. Adams, Martyn, W. P. Carr, N. P. Barnes and Fischer.

Dr. W. P. Carr showed some surgical instruments of his own

devising. Discussed by Drs. Snyder, A. B. Hooe, Williams and Carr.

Wednesday, May 3.—Joint meeting with the Baltimore Medical Society at the Cosmos Club, Washington. President Davidson and President Jones of the Baltimore Society presided. President Davidson welcomed the Baltimore members and President Jones expressed appreciation of the invitation of the District Society.

Dr. T. S. Cullen, who was on the program, telegraphed his inability to be present, on account of the death of his mother. The Secretary was instructed to send a reply telegram regretting Dr. Cullen's absence and sympathizing with him in his bereavement.

It was ordered that the meeting May 17 should be an adjourned stated meeting.

The following papers were read :

Dr. T. B. Futcher, of Baltimore ; The Allen or starvation treatment of diabetes. Discussed by Drs. W. G. Morgan, Sterling Ruffin and Futcher.

Dr. S. T. Earle, of Baltimore ; The importance of rectal examinations. Discussed by Dr. T. C. Martin.

The Societies adjourned, and a smoker followed as entertainment for the Baltimore Society.

May 10, no meeting.

Wednesday, May 17.—President Davidson presided ; about 125 members present.

The Treasurer reported for April, receipts, $60.00 ; disbursements, $305.32.

The following appropriations were made : For program postals for April, $55.33 ; for printing for Treasurer, $10.50 ; for postage for Treasurer, $20.00.

Dr. G. Wythe Cook, for the Executive Committee, recommended that the Librarian of the Surgeon General's Office be informed that in the opinion of the Medical Society the manner of publication of the Index Catalog should be continued as heretofore. The Society approved the recommendation.

The following were elected active members : Drs. Maurice A. Selinger, Georgetown University, 1915 ; David Oscar Smith, University of Michigan, 1910 ; Wm. Olendorf Wetmore, Columbian University, 1895 ; and as associate member, Dr. Ales Hrdlicka, Curator of Division of Physical Anthropology, U. S. National Museum.

A letter from Dr. T. S. Cullen, acknowledging the telegram of the Society of May 3, was read.

The following applications for active membership were received :

Wm. Elmo Turton, Georgetown University, 1908; Max Engen Wall, University of Munich, 1883, Melbourne, 1901; Maximilian Christian Wall, Guy's Hospital, London, 1911; Clifton Robert Wallace, G. W. University, 1907.

Under the auspices of the Medical History Club Dr. Frank Baker read the paper of the evening, A history of bodysnatching; illustrated with lantern slides. Discussed by Dr. L. Eliot. See page 247.

Wednesday, May 24.—President Davidson presided; about 80 members present.

An appropriation of $103.28 was made for publication of the May number of the ANNALS.

The resignation of Dr. J. A. Ferrell as associate member was accepted.

The following was appointed a memorial committee for Dr. F. B. Bishop: Drs. Roy, I. S. Stone and Malone.

The following papers were read as a symposium on infant mortality

Dr. H. W. Lawson; Prenatal causes and their prevention.

Dr. Prentiss Willson; Natal causes and their prevention.

Dr. E. P. Copeland; Postnatal causes and their prevention.

Dr. H. H. Donnally; Institutional mortality.

Dr. J. S. Wall; Influence of the welfare station in prevention.

The papers were discussed by Drs. Frank Leech, Roy, Woodward, Kober, Chappell, Moran, Paul Johnson, Lawson, Willson and Wall. See page 258 *et seq.*

Wednesday, May 31.—Vice President J. D. Rogers presided; about 50 members present.

An appropriation of $29.72 was made for program cards, and the Treasurer was authorized to pay bills, approved by the President, during the summer recess.

The committee on memorial for Dr. H. S. Dye made report, which was adopted. See page 275.

Dr. Randolph showed a specimen of streptococcic meningitis, with report of the case and result of bacteriologic examination by Dr. O. B. Hunter. Discussed by Drs. Lyon, Neuman, Williams and Randolph.

Dr. Foley read a paper on Tuberculosis of the spine in adults. Discussed by Drs. Wellington, Selby, Williams and Foley.

Dr. Selby reported a case of Tuberculous peritonitis in an infant and showed the x-ray findings. Dr. Acker read the clinical notes. Discussed by Drs. Groover, Chappell, J. D. Thomas, Acker and Selby.

Special Meeting, Friday, June 9.—President Davidson presided; about 45 members present.

Dr. G. Wythe Cook, for the Executive Committee, stated that the committee had considered and would recommend that the Society take part in the projected *Preparedness* parade of June 14. The Society adopted the recommendation. On motion of Dr. Wall the following committee was appointed to arrange the matter and expend the needed funds. Drs. Gannon, W. G. Morgan, Burke, Seibert and Macatee.

WASHINGTON MEDICAL ANNALS.

Journal of the Medical Society of the District of Columbia.

Published Bimonthly by the Society, at No. 2114 Eighteenth Street, N. W., Washington, D. C. Subscription price, including postage, $1.00 per year, in advance. Single copies, 20 cents. Advertising rates given on application.

COMMITTEE ON PUBLICATION.

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W. B. Carr, M. D., ... 1619 R Street, N. W.
H. C. Macatee, M. D., ... 1478 Harvard Street, N. W.

Editorial.

History of the Medical Society of the District of Columbia.—Price $1.00, with 25 cents added if delivered in this city or sent by mail. Address Dr. C. W. Franzoni, 605 I Street, N. W. The books are in the custody of Dr. D. S. Lamb, at the Army Medical Museum.

The Washington Medical Annals, the official organ of the Medical Society of the District of Columbia, issued the first of January, March, May, July, September and November, will publish gratuitously such information of a medical, surgical and sanitary character, changes in personnel, &c., of hospitals, dispensaries, medical schools, medical societies and other medical agencies, as would be useful and interesting to the members of the Society. Address the Chairman of the Committee on Publication.

The Washington Medical Annals.—Back numbers.—Members of the Society who have back numbers of the Annals, and do not intend to preserve them, are requested to send them to the Chairman of the Publication Committee. Requests for such numbers are frequently received.

ADVERTISEMENTS.—Attention is invited to the advertisements in this issue. All the advertisers are reliable and responsible. It is suggested that they be given preference.

The 550 members of the Society by a little effort could largely increase the number of advertisements. Dr. Frankland is the member of the Committee on Publication who has charge of this matter.

THE OTHER MEDICAL SOCIETIES OF THE DISTRICT OF COLUMBIA.

CLINICAL SOCIETY.—Officers: F. L. Biscoe, President; W. J. Mallory, Vice President; E. P. Copeland, Secretary-Treasurer; Censors: L. A. Johnson and J. D. Thomas.

CLINICO-PATHOLOGICAL SOCIETY.—Active membership limited to 25. Inactive membership: those who have withdrawn from active membership after fifteen years. A limited honorary membership of eminent medical men. Meets on the first and third Tuesdays of the month from October to May, inclusive. Officers: President, G. Brown Miller; Vice Presidents, Loren Johnson and H. H. Kerr; Secretary and Treasurer, B. M. Randolph.

EMERGENCY HOSPITAL CLUB.—The club was organized early in 1915 by the members of the Staff of the Central Dispensary and Emergency Hospital. Meetings are held on the second Saturday of each month from September to May, inclusive; the officers are ——— ———, President; W. B. Carr, Vice President; D. W. Prentiss, Secretary and Treasurer.

FREEDMEN'S HOSPITAL MEDICAL SOCIETY.—Meets on the second Wednesday of each month from October to May, inclusive. Composed of physicians connected with the Staff of the Hospital and the Medical Faculty of Howard Medical School. Collins Marshall, President; C. A. Brooks, Vice President; C. A. Allen, Secretary-Treasurer.

GALEN SOCIETY of the District of Columbia.—Wm. H. Littlepage, President; Harry A. Ong, Secretary.

GEORGETOWN CLINICAL SOCIETY; twenty-five active members, limited to graduates of the Medical Department of Georgetown University. Meets at the University Club on the third Tuesday in the month. John Foote, President; J. Russell Verbrycke, Jr., Treasurer.

GEORGETOWN UNIVERSITY MEDICAL SOCIETY.—Meets on the fourth Saturday of the month at the University Hospital. The membership consists of the Alumni, Faculty and Senior Students of the Medical School. J. A. Gannon, President; T. F. Lowe, Vice President; J. M. Moser, Secretary-Treasurer.

GEORGE WASHINGTON UNIVERSITY MEDICAL SOCIETY.—Organized 1905, membership limited to Alumni of School and Members of the Faculty. Meets in the Medical Building on the third Saturday of each month from October to May. President, E. P. Copeland; Vice President, W. H. Huntington; Treasurer, E. G. Seibert; Secretary, C. B. Conklin; President's Council, J. B. Nichols, W. W. Wilkinson, A. L. Hunt, J. Lawn Thompson, John Van Rensselaer. Active membership, 162.

HIPPOCRATES SOCIETY, membership limited to 25, with voluntary retired members after 10 years, meets on the second Thursday of the month from October to May. Officers for the year: J. R. Verbrycke, Jr., President; C. A. Simpson, Secretary.

MEDICAL HISTORY CLUB of Washington, D. C.—Officers: President, Frank Baker; Vice President, H. W. Lawson; Secretary, F. J. Stockman; Executive Committee, J. H. Bryan, Howard Hume, W. J. Mallory and the Officers. Members: Truman Abbe, Frank Baker, W. C. Borden, Joseph H. Bryan, G. Wythe Cook, John Foote, F. H. Garrison, Howard Hume, H. W. Lawson, W. J. Mallory, John B. Nichols, P. S. Roy, F. J. Stockman, I. S. Stone, John D. Thomas, Wm. A. White.

MEDICAL AND SURGICAL SOCIETY of the District of Columbia.—President, Wm. F. Sowers; Vice President, J. T. Kelley; Secretary and Treasurer, L. Eliot; Asst. Secretary, H. H. Kerr; Executive Council, John Dunlop, L. C. Ecker, H. G. Fuller, L. H. Reichelderfer and Eliot.

SOCIETY OF MEDICAL JURISPRUDENCE, Washington, D. C.—President, Dr. D. P. Hickling; Vice President, J. M. Kenyon; Secretary-Treasurer, Spencer Gordon. Meets on the second Monday of each month from October to June at University Club. Has from forty to fifty members.

SOCIETY OF OPHTHALMOLOGISTS AND OTOLOGISTS, Washington, D. C., meets the third Friday of each month from October until May, inclusive.

Officers: President, A. H. Kimball; Vice President, Mead Moore; Secy.-Treasurer, Carl Henning, The Rochambeau.

Active members: A. B. Bennett, Jr., J. W. Burke, V. Dabney, W. T. Davis, L. S. Greene, C. M. Hammett, Carl Henning, W. H. Huntington, E. B. Jones, A. H. Kimball, R. S. Lamb, F. B. Loring, O. A. M. McKimmie, W. B. Mason, M. E. Miller, Mead Moore, S. B. Muncaster, W. S. Newell, J. J. Richardson, G. S. Saffold, E. G. Seibert, E. A. Taylor, R. R. Walker, W. A. Wells.

Inactive members: J. H. Bryan, W. K. Butler, Wm. H. Fox, W. P. Malone, H. A. Polkinhorn, C. W. Richardson, D. K. Shute, W. H. Wilmer.

Associate Member: T. C. Lyster, U. S. Army.

Society for Mental Hygiene of the District of Columbia.—Board of Directors: Miss Cornelia Aldis, Surg. Gen. Rupert Blue, P. H. S., Gen. L. E. Coffer, Chief Justice J. H. Covington, Frederick A. Fenning, Lieut. Col. H. C. Fisher, U. S. A., Dr. D. Percy Hickling, Mrs. Archibald Hopkins, Dr. Loren B. T. Johnson, Miss Bessie Kibbey, Dr. George M. Kober, Miss Julia Lathrop, Dr. Frank Leech, Mrs. John McLaughlin, Hon. Stephen P. Mather, Mrs. Wesley Merritt, Mrs. Seaton Perry, Miss Janet Richards, Hon. Cuno H. Rudolph, Mrs. Geo. H. Schiebly, Miss Nellie Sedgley, Mrs. Henry G. Sharp, Mrs. George Sutherland, Mrs. Carl Vrooman, Rev. Dr. W. R. Wedderspoon, Mrs. Norman Williams, Dr. Wm. A. White, Hon. Simon Wolf, Dr. Wm. C. Woodward, Mrs. Paul Worburg.

President, Gen. Rupert Blue; Vice President, Cuno H. Rudolph; Treasurer, Miss Nellie Sedgley; Dr. Wm. A. White, Chairman Executive Committee; Dr. D. Percy Hickling, Secretary. Chief objects of the committee; To work for the conservation of mental health; for the prevention of mental disease and mental deficiency and for the improvement in the care and treatment of those suffering from nervous or mental diseases or mental deficiency.

Society of Social Hygiene, Washington, D. C.—President, Dr. Charles F. Stokes, U. S. Navy; Secretary, Lt. Col. J. R. Kean, U. S. Army, Surgeon General's Office. The Society has four committees, namely: Education, Venereal Diseases, Protection of Women and Children, and Psychopathology. Yearly dues, $1.00. Persons desiring to become members should address Col. Kean and state to which committee they wish to be assigned.

Therapeutic Society of the District of Columbia.—Meets at the G. W. School of Pharmacy, 808 I Street, N. W., on the first Saturday in each month. G. W. Latimer, President; A. P. Tibbets, Secretary.

Walter Reed Medical Society meets on the fourth Thursday of every other month, from September to May inclusive. Composed of physicians located in the eastern part of Washington. J. S. Arnold, President; H. R. Schreiber, Vice President; M. H. Prosperi, Secretary; N. E. Webb, Treasurer.

Washington Medical and Surgical Society.—President, N. D. Graham; Vice President, R. R. Walker; Secretary, Walter Van Sweringen; Treasurer, F. E. Gibson; Curator and Librarian, E. H. Egbert; Executive Committee: L. H. Taylor, Chairman, G. S. Clark, G. S. Barnhart; Program and Auditing Committee: Wm. A. Jack, Jr., Chairman, J. R. Nevitt, Walter Van Sweringen; Membership Committee: F. E. Gibson, Chairman, Wm. P. Reeves, Caryl Burbank.

WASHINGTON OBSTETRICAL AND GYNECOLOGICAL SOCIETY. —President, J. F. Moran; Vice Presidents, G. B. Miller, Prentiss Willson; Secretary, Truman Abbe; Treasurer, D. W. Prentiss. Retired members—G. N. Acker, S. S. Adams, E. A. Balloch, J. W. Bovée, W. S. Bowen, W. P. Carr, G. Wythe Cook, M. F. Cuthbert, H. D. Fry, J. T. Johnson, D. G. Lewis, A. R. Shands, E. E. Morse, Elmer Sothoron, J. Ford Thompson, John Van Rensselaer.

WASHINGTON PSYCHOANALYTIC SOCIETY.—Meets the second Saturday of each month, from October to May, inclusive. Officers: President, Edward J. Kempf; Vice President, Robert Sheehan, U. S. N.; Secretary and Treasurer, Mary O'Malley. Program Committee: Robert Sheehan, U. S. N., D. Percy Hickling and John E. Lind.

WASHINGTON SOCIETY OF NERVOUS AND MENTAL DISEASES. —President, Wm. H. Hough; Vice President, Bernard Glueck; Secretary, J. J. Madigan. The Society has a limited membership of thirty, but welcomes Physicans and Surgeons interested in Neurology and Psychiatry. Meets monthly on the third Thursday at the Cosmos Club or a member's residence.

THE WASHINGTON SURGICAL SOCIETY.—Meets at 1621 Conn. Ave. the third Friday of the month at 8 P. M. The officers are H. A. Fowler, President; D. W. Prentiss and Walter Webb, Vice Presidents; H. G. Fuller, Secretary, and J. A. Gannon, Treasurer. Members of Council, H. D. Fry, J. F. Moran and the officers.

WOMEN'S MEDICAL SOCIETY of the District of Columbia. —President, Emma Lootz Erving; Vice President, Louisa M. Blake; Secretary and Treasurer, Martha M. B. Lyon; Corresponding Secretary, Mary Holmes.

THE SECRETARIES of the other Medical Societies of this District are reminded that the ANNALS will publish the schedules of their meetings.

AMENDMENTS TO THE CONSTITUTION AND BY-LAWS.—The following amendments have been made since the publication in Volume XII, March, 1913.

Constitution.—Article V, Section 4, adopted Nov. 4, 1914: before the words "Due notice" on page 142, insert "No application for membership that is rejected or withdrawn shall be renewed until after two years from the time of its rejection or withdrawal."

Section 10, same article; adopted Jan. 7, 1914: for "two years" substitute "one year." At the end of the section, add the words "Members so dropped may, after report by the Com-

mittee of Censors, be reinstated by the Society upon the payment of arrears in dues." Adopted March 1, 1916.

Article VI, Section 5, adopted Jan. 6, 1915: in the last line, for "two" substitute "three."

Article VIII, Section 2, page 148, 4th line from top: for the word "disorders" substitute the word "diseases."

Article IX, Section 2, first line, for the word "four" substitute "five." Adopted March 1, 1916.

By-Laws.—Article VIII, Section 9, page 153, adopted Jan. 7, 1914: No member of the Staff of any hospital receiving patients in private rooms shall attend such private patient sent to the hospital by a member of the Society, not a member of the Staff, unless specifically requested to do so by the attending physician.

Please note that the figures in Sections 7 and 8 of this article, instead of being 7 and 8 should be 5 and 6.

Some Special Committees of the Society:

On First Aid Conference.—Drs. C. S. White, H. H. Kerr and W. P. Reeves.

On National Legislative Committee.—Dr. L. B. T. Johnson.

On Regulation for Control of Contagious Diseases.—Drs. Frank Leech, H. H. Donnally, S. S. Adams, W. C. Woodward, N. P. Barnes, J. S. Wall and L. B. T. Johnson.

On Meeting Place of Society.—Drs. G. Wythe Cook, A. B. Hooe. A. L. Hunt, A. R. Shands and J. D. Thomas.

On American Red Cross.—Drs. L. H. Reichelderfer, L. B. T. Johnson and A. L. Hunt.

Memorial Committees.—On the death of Dr. Winter: Drs. Lemon, Holden and Sorrell. On the death of Dr. Lynch: Drs. Kinyoun, Frank Leech and W. C. Fowler. On the death of Dr. Bishop: Drs. Roy, Stone and Malone. On the death of Dr. Walker: Drs. Ecker, Waters and Cole.

Centennial Committee.—Dr. Nichols, Chairman; Drs. D. S. Lamb, G. Wythe Cook, Roy, W. P. Carr, Kober, Boswell, Tayler-Jones, Macatee, S. S. Adams, Chas. Richardson, Hunt, A. B. Hooe, J. D. Thomas and Frank Hagner.

Committee on Cancer.—Drs. Karpeles, Frank Hagner, Balloch, W. C. Borden, W. P. Carr, Vaughan, J. F. Mitchell, Sprigg, C. W. Richardson, Gannon and Abbe.

Starmont Sanatorium.—Gen. Sternberg's Home for Treating Tuberculosis.—The attention of the members of the society is called to this purely philanthropic enterprize. General Sternberg was the originator and founder of this institution, and your earnest solicitation is requested in furthering the good work of this undertaking by referring patients to the Sanatorium. Incipient and moderately advanced cases are accepted. The rates vary from $12.50 to $20, depending upon the condition of the

patient, the quarters and necessary service. Full data will be forwarded on application. Phone connection. Address Dr. L. F. Kebler, Washington Grove, Md.

Some Results for 1915.

Person.	Weight on admittance.	Weight on given date.	Weight, eight weeks later.
Mrs. B.	104	104	115
Miss F.	106	116½	128½
Miss K.	88	98	103½
Miss W.	88	94½	119½
Mrs. M.	98	105	119½
Mr. S.	137	142	147

American Medical Editors' Association.—Annual meeting, October 25 and 26, at the McAlpin Hotel, New York City. Officers: Dr. E. C. Register, *Charlottee* (N. C.), *Medical Journal*, President; Dr. W. A. Jones, *Journal-Lancet*, Minneapolis, Minn., First Vice President; Dr. G. M. Piersol, *American Journal Medical Sciences*, Philadelphia, Pa., Second Vice President; Dr. J. McDonald, Jr., *American Journal Surgery*, New York City, Secretary and Treasurer.

U. S. Navy.—The next examination for appointment in the Medical Corps of the Navy will be held on or about August 7, 1916, at Washington, D. C., Boston, Mass., New York, N. Y., Philadelphia, Pa., Norfolk, Va., Charleston, S. C., Great Lakes (Chicago), Ill., Mare Island, Cal., and Puget Sound, Wash. Full information with regard to the physical and professional examinations, with instructions how to submit formal application, may be obtained by addressing the Surgeon General of the Navy, Navy Department, Washington D. C.

Public Health Service Aphorisms:

Rural sanitation is a health protection to the city dweller.

It's foolish to educate a boy and then let him die of typhoid fever.

The U. S. Public Health Service issues a free bulletin on the summer care of infants.

Exercise in the garden is better than exercise in the gymnasium.

Clean water, clean food, clean houses make clean, healthy American citizens.

The State of California has reduced its typhoid death rate 70 per cent. in the past ten years.

Rats are the most expensive animals which man maintains.

It is estimated that the average manure pile will breed 900,000 flies per ton.

Dirty hands spread much disease.

A high bred dog has a right to have his birth registered—so has a baby.

The U. S. Public Health Service guards American ports to exclude foreign disease.

Health is a credit with the Bank of Nature.

A clean garbage can is a good example to the family.

Filth breeds flies—flies carry fever.

Slouchy postures menace health.

Health brings happiness—sickness, sorrow.

Life is a constant struggle against death.

Dirty refrigerators may make sickness.

The U. S. Public Health Service issues free bulletins on rural sanitation.

The defective citizen of today is ofttimes the unhealthy child of yesterday.

Every man is the architect of his own health.

It's the baby that lives that counts.

Tuberculosis is contagious, preventable, curable.

The full dinner pail—the open window—the clean well—make for health.

Efficient muzzling of dogs will eradicate rabies.

The protection of the health of children is the first duty of the Nation.

Bad temper is sometimes merely a symptom of bad health.

Insanity costs every inhabitant in the United States $1 per year.

The U. S. Public Health Service has proven that typhus is spread by lice.

Untreated pellagra ends in insanity.

In the lexicon of health there is no such word as "neutrality" against disease.

The death rate of persons under 45 is decreasing; of those over 45 is increasing.

Today is always the best day to clean up.

Fresh air, food, rest—these three combat tuberculosis.

The U. S. Public Health Service has reduced typhoid fever 80 per cent. in some communities.

Overeating, constipation, lack of exercise, foul air, eye strain, may produce headache.

Polluted drinking water causes many deaths.

An efficient health officer is a good community investment.

Bad teeth handicap children.

Insufficient sleep endangers health.

It's worry, not work, which shortens life.

A cold bath every morning is the best complexion remedy.

Poor health is expensive.

The U. S. Public Health Service has reduced malaria 60 per cent. in some localities.

The death rate from typhoid fever in the United States has been cut in half since 1900.

Pneumonia kills over 120,000 Americans each year.
Flyless town has few funerals.
The well that drains the cesspool is the cup of death.
Better wages make better health.
Better health makes better citizens.
Better citizens make a better nation.
The U. S. Public Health Service found 78 per cent. of the rural homes in a certain county unprovided with sanitary conveniences of any kind.
Cholera is spread in the same manner as typhoid fever.
Scarlet fever kills over 10,000 Americans each year.
Hookworm enters through the skin.
He who builds up health lays up treasure in the Bank of Nature.

Fourth of July Tetanus.—In 1905 there were 104 deaths in the United States from Fourth of July tetanus, this figure representing about the average annual mortality. In 1914, as a result of the institution of better prophylactic treatment by physicians and the widespread agitation for a safe and sane Fourth, the number was reduced to 3. One year ago the U. S. Public Health Service expected and predicted that every youngster in the United States would be safe from this disease, basing its estimate on what had already been accomplished. When the returns came in it was found that a boy down in Maine had been injured, developed tetanus and died. That single fatality was only one among several hundred thousand occurring in the United States during 1915, but it resulted from Fourth of July tetanus, a preventable disease, and was therefore an unnecessary death. The loss of this boy makes it necessary to again disseminate information regarding this wholly avoidable infection.

The National Board of Medical Examiners of the United States.—The need of a standard medical examining body for the whole United States and its Territories (tributary thereto) has occasioned the organization of The National Board of Medical Examiners. It is a voluntary board, the members of which are selected from the Medical Corps of the Army, the Navy, and the Public Health Service, the Federation of State Examining Boards, and other representative organizations, and the medical profession of the United States. The aim of this Board is to establish a standard of examination and certification of graduates in medicine, through which by the coöperation of the individual Boards of Medical Examiners, the recipients of the certificates of the National Board of Medical Examiners may be recognized for licensure to practice medicine. The policy of the Board is to conduct its examinations on a broad scientific basis of such a high yet practicable standard that the holders of its certificates will receive universal recognition. The inde-

pendent action by the Board is furthered by the financial and moral support of the Carnegie Foundation. The Board consists of the following members: Surgeon General W. C. Braisted, U. S. N., President; Colonel Louis A. LaGarde, U. S. A., Ret., Treasurer; Surgeon General W. C. Gorgas, U. S. A.; Surgeon General Rupert Blue, U. S. P. H. S.; Medical Director E. R. Stitt, U. S. N.; Assistant Surgeon General W. C. Rucker, U. S. P. H. S.; Dr. Herbert Harlan, Federation of State Medical Examining Boards; Dr. Isadore Dyer, New Orleans, La.; Dr. Victor C. Vaughan, Ann Arbor, Mich.; Dr. Henry Sewall, Denver, Col.; Dr. Louis B. Wilson, Rochester, Minn.; Dr. E. Wyllys Andrews, Chicago, Ill.; Dr. Horace D. Arnold, Boston, Mass.; Dr. Austin Flint, New York, N. Y., and Dr. J. S. Rodman, Secretary, 2106 Walnut Street, Philadelphia, Pa. The official domicile of the Board is Washington, District of Columbia.

The Suit of the Chattanooga Medicine Company for $100,000, against the American Medical Association, ended, as is well known, in the jury finding for the plaintiff in the sum of one cent damages. The Editor of this journal sent a letter of congratulation to Dr. Simmons and received the following reply:

"Dr. D. S. Lamb, Washington, D. C.

"Dear Doctor Lamb: Many thanks for your kind letter of the 27th ult. Yes, in spite of the fact that technically we lost, we regard the verdict as a great moral victory; and, considering all the circumstances, especially certain facts which at this time cannot be made public, it should be so regarded. The other side certainly do not consider that they have won out, for it is rumored that they propose to ask for a new trial.

"Again thanking you, and with best wishes, I am, sincerely yours, George H. Simmons."

Special Laboratory or Clinical Work.—Members of the Society who are doing special work, laboratory or clinical, are requested to send name and subject to the Editor. This is not for publication, but for information and reference. Thus, a number of members are doing x-ray work; some limit their practice entirely or mainly to a specialty. The Editor is frequently asked in regard to these things and is unable sometimes to answer satisfactorily.

The 150th Anniversary of the Founding of the Medical Society of New Jersey.—The President of the Medical Society of the District of Columbia, Dr. E. Y. Davidson, received an invitation to attend the 150th anniversary of the New Jersey State Medical Society, and writes to the Editor of the Annals the following letter:

"My dear Doctor Lamb:

"I thank you very much for your kind note of the 6th instant in which you suggest that I send you for publication in the ANNALS an account of my attendance at the celebration of the 150th anniversary of the Medical Society of New Jersey. It may be well to let it appear that the president of our Society was a guest of the Medical Society of New Jersey at the celebration of its 150th anniversary at Asbury Park, N. J., June 20–22, 1916, and that at a reception tendered to the Presidents of the State Societies on the morning of June 21st, Dr. E. Y. Davidson, on behalf of the Medical Society of the District of Columbia, responded as follows:

"'I bring you the felicitations of the Medical Society of the District of Columbia. I would be insensible to the finer emotions and gentler impulses which stir the human heart were I not responsive to the depth and breadth, the genuineness and wholesomeness of this magnificent reception.

"'What an eventful period in our country's existence is covered by the life history of the Medical Society of New Jersey. It is hard to realize that the founding of the Society antedates by about ten years the birth of this Republic, but it is easy to understand why the society has existed for 150 years, and why it has been a potent factor in the advancement of American Medicine. The society was born of a hardy and intrepid parentage, during a critical and crucial period of Colonial life, when men had irrevocably resolved to throw off a foreign yoke and to establish in this fair land a free democracy; and no offspring of such forebears dared do otherwise than perpetuate the society and carry forward with increased effectiveness its high mission. The fulfilment of that mission is known to all. With each advancement in medicine, members of this society have been found in the foreground. Their names adorn the pages of our literature and they are honored the world over for their achievements in medicine.

"'It is a most pleasing mission I perform in paying to the Medical Society of New Jersey not only the honors of seniority, but the honors of high achievement.'

"Respectfully yours,

"E. Y. DAVIDSON."

REVIEW.

CANDY MEDICATION, by BERNARD FANTUS, Professor of Pharmacology and Therapeutics, College of Medicine, University of Illinois. MOSBY & CO., St. Louis. Mo., 1915.—It seems like a small thing, at first sight, to devote an entire book to the subject of candy medication, but mature reflection on the part of any

medical man will convince him that there is a real necessity for such a volume. Dr. Fantus has written almost the first and last words upon the subject in his little book "Candy Medication," published by the Mosby Company. He has made considerable research in his efforts to comprehensively systematize his *tabellae dulces* and adapt them to many much used drugs and preparations. Of course it will be apparent to all practitioners of medicine that the fundamental reason or necessity for the development of a systematic candy medication is to enable us more readily to administer drugs to children who cannot take large capsules, konseals, pills and hard tablets. This is the true *raison d'etre*, and the necessity for it is demonstrated not only in each of our personal experiences, but in the enormous popularity of sweet candy proprietary medicines among doctors and laymen. The book of Dr. Fantus, in the early chapters, describes the general uses of sweet tablets and the method of manufacture, while the major portion of the little volume consists of a list of formulae for the preparation of a large number, in fact 58 different drugs and preparations. The book will be really valuable to every physician who prescribes for children. There is only one danger. If drug taking is to be made easier it is to be hoped that physicians will never cease to remember that a drug has not lost its physiological and toxic action by being made palatable.—W. M. Barton.

RECENT PUBLICATIONS BY PHYSICIANS OF THE DISTRICT OF COLUMBIA.

C. L. Alsberg and O. F. Black; Separation of autogenous and added hydrocyanic acid from certain plant tissues and its disappearance during maceration. *Jour. Biol. Chem.,* May; abstracted in *Jour. A. M. A.,* June 3, 1821.

H. G. Beyer, U. S. Navy; Etiology of typhus, and louse extermination, from viewpoint of sanitarian; *Mil. Surg.,* May. Also, Red Cross Auxiliary Naval Hospital at Hamburg, Germany; U. S. Naval Med. Bull., July, 465.

Rupert Blue, P. H. S.; Some of the larger problems of the medical profession; *N. Y. Med. Jour.,* June 17.

J. G. B. Bulloch; Must the medical man have a collegiate education and are medical examining boards essential; *West. Med. Times,* June, 571.

H. S. Cumming, P. H. S.; Investigation of the pollution of tidal waters of Maryland and Virginia; Pub. Health Bull. 74, March.

C. H. Danforth; Relation of coronary and hepatic arteries in common ganoids; *Amer. Jour. Anat.,* May.

V. E. Emmel; Cell clusters in dorsal aorta of mammalian embryos; *Ibid.*

A. M. Fauntleroy, U. S. Navy; Report of a case of intussusception caused by a Meckel's diverticulum; U. S. Naval Med. Bull., July, 511.

J. M. Flint; Organization and problems of war hospital; *Mil. Surg.*, April and May.

L. D. Fricks, P. H. S.; Rocky mountain spotted fever; Reprint 327 from Pub. Hlth. Reports, March 3.

J. D. Gatewood, U. S. Navy; Contribution to the study of artificial illumination; U. S. Naval Med. Bull., July, 401. Also, Early history of Naval Hospital Reservation, Washington; *Ibid.*, 573.

W. C. Gorgas, U. S. A.; Sanitation in Panama; Review in *South. Med. Jour.*, June, 571.

H. H. Hazen; Cases illustrating the faulty treatment of superficial malignancy; *Jour. A. M. A.*, June 10, 1829.

L. T. Hess, U. S. A.; Deficiency of sanitary units of organized militia; *Mil. Surg.*, April.

R. C. Holcomb, U. S. Navy; The atmosphere and its relation to the human mechanism, with special reference to the naval service; U. S. Naval Med. Bull., July, 430.

L. W. Johnson, U. S. Navy; Syphilis in a Chamorro; *Ibid.*, 511.

J. R. Kean, U. S. A.; New rôle of American Red Cross; *Mil. Surg.*, May.

W. V. King; Anopheles punctipennis, a host of tertian malaria; *Amer. Jour. Trop. Dis.*, 426; abstracted in *South. Med. Jour.*, June, 500.

G. M. Kober and W. C. Hanson; Diseases of occupation and vocational hygiene; published by Blakiston, Son & Co., Philadelphia.

R. S. Lamb; Internal secretory system in ophthalmology with special reference to goiter; *Annals of Ophthalmology*, April.

A. J. Lanza; Health hazards of metal mining industry; *Amer. Jour. Pub. Hlth.*, May. Also, Miner's consumption in southwestern Missouri; report of a case; Missouri *State Med. Assn. Jour.*, June, 251; abstracted in *Jour. A. M. A.*, July 1, 76.

M. W. Lyon, Jr., Ambystoma not amblystoma; *Science*, June 30, 929.

T. C. Merrill; Some aspects of home use of proprietaries with children; *Amer. Jour. Pub. Hlth.*

S. B. Muncaster; Experience in cataract operations; *Ophthalm. Record*, May.

M. M. Obst; Bile compared with lactose bouillon for determining presence of B. coli in water; *Jour. Bact.*, January; abstracted in *Jour. A. M. A.*, June 3, 1820.

Mary O'Malley; Relation of pellagra to nutrition; *South. Med. Jour.*, June, 498.

M. A. Reasoner, U. S. A.; Early death from cerebral syphilis, with successful rabbit inoculation; *Jour. A. M. A.,* June 17, 1917.

D. E. Robinson and J. G. Wilson, P. H. S.; Tuberculosis among industrial workers; Public Health Bull., 73, March.

M. E. Scheetz; Sensibility of nipple area with reference to mental disease; *Amer. Jour. Insanity,* April.

E. F. Smith; Studies on crown gall of plants: its relation to human cancer; *Jour. Cancer Research,* April.

C. H. T. Townsend, Etiology of verruga as deduced from study of asexual stages of bartonella; *Jour. Parasit.,* March.

J. W. Trask, P. H. S.; The relation of the practicing physician to the public health administration; *Jour. Tenn. State Med. Assn.,* June, 1915, 77; abstracted in *South. Med. Jour.,* June, 1916, 500. Also, Practical utilization of vital statistics in prevention of disease and control of epidemics; *Mil. Surg.,* April.

A. Viehoever, C. O. Johns and C. L. Alsberg; Cyanogenesis in plants; *Jour. Biol. Chem.,* May.

W. A. White; Psycho-analytic tendencies. Annual meeting of Amer. Med. Psych. Assn., at New Orleans, April 5.

M. I. Wilbert, P. H. S.; Some fallacies regarding phenol; Reprint 336, from Pub. Hlth. Reports, April 28.

T. A. Williams; Functional and organic differentiation in nervous diseases as shown by cases; abstracted in *South. Med. Jour.,* June, 500.

A. A. Wilson; Case of peripheral neuritis with Korsakow's symptom complex; *Jour. Nerv. and Ment. Dis.,* May.

B. L. Wright, U. S. Navy; Treatment of pyorrhoea alveolaris and its secondary systemic infections by deep muscular injections of mercury; *Med. Record,* N. Y., May 6; abstracted in *Jour. A. M. A.,* May 22, 1745.

PERSONAL NOTES.

Dr. S. S. Adams attended the meeting of the American Pediatric Society, May 8 to 10, and took part in discussion.

Dr. T. A. Ashby, of Baltimore, an honorary member of this Society, died June 26.

Dr. J. W. Bovée attended the meeting of the Medical Society of the State of New York at Saratoga Springs, May 16 to 18, took part in discussions and read a paper on "Syphilitic invasion in Gynecology and Obstetrics."

Major Roger Brooke, M. C., U. S. A., has been ordered to duty as Attending Surgeon in this city.

Dr. F. V. Brooks of this Society died June 25. The Society will take appropriate action at its meeting in October.

Dr. G. Wythe Cook, delegate to the Amer. Med. Assn., is a member of its committee on Rules and Order.

Dr. John S. Gaul, 1st Lt., M. R. C., U. S. A., has been ordered for duty to Walter Reed Hospital.

Surgeon General W. C. Gorgas, U. S. A., accompanied by Major E. R. Whitmore and Major T. C. Lyster, M. C., U. S. A., have been granted four months leave to visit South America, with reference to the study of yellow fever there.

Dr. Cary T. Grayson, U. S. Navy, was married, May 24, to Miss Alice Gertrude Gordon, of New York City.

Dr. A. L. Hunt was married, June 14, to Miss Marie Seitz, of this city.

Dr. S. R. Karpeles and Dr. Kate B. Bogle of this city and this Society, were married June 7.

Dr. J. R. Kean, M. C., U. S. A., is a member of the committee on Constitution and By-laws of the A. M. A.

Dr. J. W. Kerr, P. H. S., is a member of the committee on Hygiene and Public Health of the A. M. A.

Dr. Ernest F. King of this Society died June 8. Appropriate action will be taken by the Society at the first October meeting.

Dr. J. J. Kinyoun has accepted the position of Health Officer at Winston-Salem, N. C.

Dr. G. M. Kober is chairman of the committee on Red Cross of the A. M. A. Drs. W. J. Lyster, M. C., U. S. A., and R. C. Holcomb, U. S. Navy, are also members of the same committee.

Dr. Rosalie S. Morton, formerly of this Society, has been elected an Attending Physician at the Vanderbilt Clinic, N. Y. City. Dr. Morton also has presented to the Women's Medical College, Philadelphia, a relief tablet entitled "The Woman Physician."

Matilda Smoot Fox, wife of Duane E. Fox, of this city, and daughter of the late Dr. S. C. Smoot of this Society, died in this city May 29.

Dr. E. R. Stitt, U. S. Navy, is a member of the committee on Reports of Officers of the A. M. A.

Dr. E. B. Vedder, M. C., U. S. A., attended the meeting of the Amer. Assn. Immunologists May 11 and 12, and took part in the discussions.

Dr. W. C. Woodward was elected one of the councillors of the Amer. Assn. Med. Jurisprudence at the annual meeting in this city, May 6.

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WASHINGTON MEDICAL ANNALS

CASE OF STREPTOCOCCUS MENINGITIS.*

By B. M. Randolph, M. D.,

Washington, D. C.

Mrs. E., white, aged 58, a healthy vigorous woman, leading an active life as housewife and nurse to an invalid husband.

About a month before her death felt tired, and had some fulness in her head on stooping forward. At the solicitation of friends she consulted me, saying that she feared arterio-sclerosis. I went over her thoroughly, finding no evidence of any disease. Her systolic pressure was 145, and urinalysis showed no evidence of renal disease.

A week or more later she was attacked with the prevailing epidemic of so-called *grippe*, having headache, muscular pains, slight fever and catarrhal involvement of the nasal passages and trachea. Under catharsis, diaphoresis and rest in bed, these symptoms quickly disappeared, and in three days she felt well, and was again about her household duties.

Three or four days later she had in the evening a throbbing pain in her head and pain also in her right ear. Early next morning the tympanic membrane ruptured spontaneously from middle ear abscess. There was a copious purulent discharge, which on culture gave staphylococcus pyogenes aureus. Under irrigation the discharge subsided, but showing a tendency to return, I referred her to Dr. W. B. Mason, whom she first consulted, Feb. 18. Dr. Mason's examination revealed no cause for serious concern, and she was given directions as to treatment and to report conditions. Feb. 21 she reported to Dr. Mason that she had a return of pain and throbbing. He found a bulging pulsating membrane in right ear which he incised, liberating a very abundant purulent discharge. She stated that she was much relieved, and returned home.

The same evening, on retiring, she felt some nausea, and took a dose of a domestic preparation containing sodium bicarbonate and peppermint water. During the night she was very restless, and complained of pains in her legs, and towards morning vomited.

* Reported with specimen to the Medical Society May 31, 1916.

I saw her at 7:30 A. M., of the 22d, and found her in a semi-stuporous state, but readily aroused. The pulse was 84, and the temperature 100.4. Examination showed no rigidity, no paralysis; reflexes normal; Kernig sign absent; pupils responded normally to light and accommodation, and equal in size; muscular movements of eyes normal. I had her removed to the George Washington University Hospital, where she arrived at 11:30 A. M.

The diagnostic question seemed to involve the possibility of meningitis, apoplexy, cerebral thrombosis and uremia.

Meningitis or brain abscess was first thought of in connection with the middle ear infection. Absence of rigidity, of Kernig's sign and of focal evidence of brain irritation made me hesitate about this diagnosis. The absence of paralysis and Babinsky's reflex seemed to exclude intracranial vascular injury. In spite of the fact that the kidneys had been found competent a short time previously, uremia had to be excluded. On reaching the hospital a catheterized specimen was examined, and showed no evidence of renal disease. The temperature had now risen to 103.2, and the pulse to 100. Leucocytes 23,000. General physical examination was negative, attention being especially given to a search for evidences of pneumonia.

She was given two minims of croton oil, which resulted in two copious bowel movements. Dr. Mason examined the ears that day, and was unable to find any evidence of mastoid involvement, and the middle ear condition seemed to have greatly improved since the incision of the day before.

The patient lay persistently on her chest, which was, however, her habit in sleeping. She was very restless, trying at times to get out of bed, and requiring restraint; constantly mumbling, moaning or grunting. She was, however, rational and could answer questions, and coöperate intelligently in tests. She drank water with avidity, vomiting it immediately at first, but later retaining it. She took no nourishment throughout her illness except a little milk. Urine removed by catheter; involuntary stools. Toward evening she seemed brighter and more natural. She never admitted that she had any pain.

Feb. 23. In the morning I had Dr. Hough see the patient with me. I had now returned to my original surmise that she had an intracranial inflammation, and considered the advisability of spinal puncture for both diagnostic and therapeutic purposes. Dr. Hough examined the patient thoroughly, and noted the same absence of determining signs that has already been described. He did not feel that spinal puncture was justified, and advised waiting. In the afternoon the patient's condition seemed somewhat improved. Dr. Mason again examined the ears and found that the middle ear discharge had subsided.

Feb. 24. About 8 A. M. the interne at the hospital telephoned

that the patient's temperature, respiration and pulse rate had increased, and that things looked bad. At 9 A. M. Dr. Hough made a spinal puncture. There was no increase of pressure. The fluid withdrawn was purulent. An immediate smear examination excluded the diplococcus of epidemic meningitis.

For the first time the patient showed some stiffness of the neck. No other muscles seemed involved, nor were there other additions to the findings already noted. From now on the stupor progressively deepened. On the afternoon of this day there appeared a deviation of both eyes to the right, and later there was complete dilatation of the right pupil, and moderate dilatation of the left. There also appeared at the outer lower margin of the cornea of the left eye a subconjunctival hemorrhage sharply outlined. This subsided before death, leaving an ecchymotic area.

Feb. 25. Examination of the retinal fields by Dr. Seibert and myself showed moderate sclerosis of the vessels, normal discs, and no recent changes except choroidal congestion. No further neurological examination made that day. The patient died at 8:20 P. M.

Autopsy.—Section of the cranium only was permitted; performed two hours after death: There was engorgement of the veins of the scalp and posterior cranial region. On opening the dura there was a copious flow of dark venous blood from the sinuses in the posterior regions, the blood clotting almost immediately. A moderate flow of purulent fluid from the spinal canal. Fibrinous exudate with edema of the pia over the entire cortex and base. Veins of both superior petrosal sinuses contained tenuous clots. Starch agar culture from one of these clots (right) negative. Careful examination of the bony structures revealed no evidence of bone necrosis or inflammation, nor any connection of mastoid cells with cranial cavity.

Microscopic examination of sections of the right mastoid showed acute exudative inflammation without necrosis or pus formation.

The infecting organism appeared in the smear from the spinal pus as an irregular coccoid organism, capsulated, generally in pairs, occasionally in short, irregular chains. It responded negatively to the cultural and pathogenic criteria of pneumococcus, and on further study proved to be a hemolytic streptococcus. The bacteriological examination was made by Dr. O. B. Hunter.

Dr. O. B. Hunter regretted that the study of the specimens and of the organism was not yet complete; the brain had not yet been sectioned. The case was of particular clinical interest because of the slow development of the symptoms and because there was extensive mastoid involvement without symptoms. Whether the organism recovered from the mastoid cells and that grown from the spinal fluid are identical had not yet been determined. The study

of the organism gave trouble at first because he thought he was dealing with the pneumococcus; but the organism does not conform to the morphology of the pneumococcus; it grows in chains, and it has no effect upon inulin, the latter feature being a very important factor in the decision that the organism was not pneumococcus. The organism had no effect upon guinea pigs, mice nor rabbits; but after growing on rabbit blood-serum agar it acquired a virulence for the rabbit. He expressed the belief that the reason the organism from the ear discharge did not grow was because starch agar was the medium used, and the organism from the spinal fluid did not grow on that medium; he believed the organism was present in the ear discharge. Rabbits when inoculated subdurally with the organism exhibited symptoms very like those in the patient; the symptoms also were similarly slow in developing.

Dr. M. W. Lyon congratulated Dr. Randolph on the interesting case report but thought the title misleading; he saw no good reason why the meningitis should be called streptococcic rather than pneumococcic; the organism conformed to ordinary conceptions of the pneumococcus. The streptococcus, as ordinarily accepted, should produce hemolysis on blood agar, should grow with a capsule, and should produce a green stain about the culture. The studies presented included no mention of hemolysis. He disagreed merely with the nomenclature; practically, the streptococcus and pneumococcus are closely related. This organism seemed to him like the group III pneumococcus of Dochez and Gillespie.

Dr. Lester Neuman had enjoyed the unusually full presentation of the case. He had been inclined to call organisms, giving the characters of that here described, pneumococcus, when encountered in his own work; he referred to an organism found to be Gram positive, and occurring as encapsulated diplococci. The fact that the organism grew in chains is not particularly significant, because the pneumococcus grows in this way artificially. He had, however, seen recently two undoubted cases of streptococcus meningitis. We must depend ordinarily on diagnosis by smears in these cases because quick diagnosis is required.

Dr. Tom A. Williams said, with regard to meningeal cases with no organisms in the spinal fluid, that such cases are occasionally met with; he had seen one such recently, there was no organism to be seen in the spinal fluid, and no reaction followed animal inoculation; the meningeal reaction was due to an abscess of the brain. In middle ear inflammation also, with mastoid involvement, there may be a meningeal reaction, with increased cells and increased volume of spinal fluid, but with no organisms. Such cases may be called serous meningitis.

Dr. Randolph expressed his satisfaction with the discussion, particularly as it had exemplified what the case had impressed

upon him, namely, the utter impossibility of classifying bacteria of the type under consideration on morphological grounds alone. The subdivisions of organisms now in vogue are too complicated to be true. We know from Rosenow's work how organisms may vary within a single family. He had seen pneumococcus meningitis repeatedly; the organism in the case reported was totally different from the organism we are accustomed to deal with. Our words must mean something; and when we speak of a pneumococcic infection we think of an abrupt, acute, self-limited disease; but when we speak of streptococcic infection we think of something very different, and we know that we have to deal with an infection that will not readily let go. In this particular case there was a widespread meningitis, without any determining nervous symptoms. Streptococcus infections need to be studied further; they may have the most astonishingly diverse manifestations and most diverse cultural changes. The whole matter needs reconsideration.

POTT'S DISEASE IN ADULTS; REPORT OF 61 CASES WITH REFERENCE TO DIAGNOSIS AND PROGNOSIS.*

By Thomas M. Foley, M. D.,

Washington, D. C.

About a year ago, having access to the records of the Massachusetts General Hospital, I attempted to select those cases of Pott's disease having their initial symptom in adult life, being rather curious as to the prognosis, especially in the cases having lung lesions as a complication and those with paraplegia. Out of many cases only those with good histories were selected, which limited the series to the last four years, as, prior to that time, careful, complete records were not kept in even that hospital, at least not in the Orthopedic Department.

It was in 1779 that Sir Percival Pott first described the slowly developing angular deformity known as Pott's disease, which included at that time various causes, such as fracture, malignant disease, erosion by an aneurism, syphilis or other disease. But more than one hundred years elapsed before Robert Koch, in 1882, discovered the tubercle bacillus that definitely determined the etiology of the disease and confined it to those cases of kyphosis

* Read before the Medical Society May 31, 1916.

where the deformity is due to a tubercular infection of the bodies of the vertebrae, the compression and disintegration of which produce the characteristic angular deformity.

Pott's disease, as it occurs in all ages, especially in childhood, has been fairly well reviewed; in fact, most of our statistics are derived from cases occurring before the fifteenth year, but there has been no distinction made between the disease as it affects childhood and as it affects the adult. Dr. Mark H. Rogers, of Boston, in an analysis emphasizes the radical difference in the diagnosis, prognosis and treatment of tuberculous knees and ankles in children as compared with the same disease in adults; and it is with the hope of contributing something to the literature on Pott's disease in the adult that this paper is presented.

Of 1259 cases of tuberculous spines occurring in the Hospital for Ruptured and Crippled, analyzed in 1910 by Frank and Gunther, there were only 85 patients over 20 years of age, though it was not implied that they were free from tuberculosis until that age. Marsh, in 1896, reported 3 cases of tuberculous spines in the aged, two of which were cervical.

Pott's disease in adults with lung and cord-pressure symptoms is generally understood to have a poor prognosis. Operations on the spine in those having phthisis are reluctantly undertaken for the reason that they are believed to lower the already poor resistance—the constriction of the chest by the plaster cast treatment impeding respiration and the recumbent posture necessary after operation being especially unfavorable and unhygienic in lung cases. It is looked upon as a malignant process by many writers. Unfortunately the subject of Pott's disease in adults has not been reviewed so far as an ordinary search of the literature would disclose. Hawes, of Boston, in a study of 74 cases of Pulmonary Tuberculosis, in the aged emphasizes the paucity of literature on that subject, which is surprising, as medical diseases have been more thoroughly worked up than surgical.

The disease occurs with greater frequency in males than in females at the rate of five to four, and while it may occur at any age, it is a disease of middle childhood. Any part of the column may be affected though the most frequent location is at the dorso-lumbar junction. "The pathologic changes consist of a tuberculous affection of the spongy tissue of one or more bodies, generally at the anterior portion and more often near the articular cartilage than elsewhere. A superficial infection of the front of the vertebral column is recognized and spoken of as spondylitis superficialis; the laminae, spinous and transverse processes are rarely attacked, but their occasional invasion is recognized." Paralysis may result through pressure on the cord due to thickening of the posterior part of the vertebral bodies, at the seat of inflammation of those bodies, and because of widespread disease.

Embolism of the spinal vessels, strangulation of the cord by the bone of the vertebral arch, loosened bone fragments, abscesses on the cord, and, in the case of meningo-myelitis, the sclerosis that remains after its subsidence, are all causes of paralysis. The early symptoms are to be found in the attitude, pain, deformity, abscesses and paralysis. One important early symptom is the relief of pain by hyperextension.

Differential Diagnosis.—As the study of the cases progressed, in addition to the observations on the lung, and cord complications, it was observed that frequently case reports presented themselves in which there had been treatment for years for something other than Pott's disease. A brief list of the different diagnoses will give some idea of the difficulty of early correct diagnosis. Torticollis, rheumatic affections, neck sprains and the position caused by inflamed cervical lymph nodes (examination of throat and palpation with finger in mouth) are conditions that present symptoms of cervical disease; while the disease of the lower region is confused with round shoulders, and the pain of this condition often referred to the anterior part of the trunk by means of the intercostal nerve, simulating gastritis, pleuritis and cardiac disease, just as in hip disease the pain is referred to the inner side of the knee through the obturator nerve.

Spondylitis deformans or arthritis deformans presents the stiffness, pain and rigidity of Pott's disease, but with the stiffness more diffuse and angular kyphosis is lacking, the x-ray of this condition showing changes characteristic of bony deposit.

Malignant disease, presenting symptoms simulating Pott's disease, can be rightly diagnosed with the help of the x-ray, which shows a destruction not only of the spongy bone, but of the laminae and spinous process as well.

The x-ray of the syphilitic spine shows a building-up process which is often unilateral, but compatible with free motion and there is a lack of pain.

The typhoid spine, greatly resembling Pott's disease and occurring late in typhoid fever, with great pain and nervous disturbance, is not to be differentiated by the symptoms alone. The x-ray shows a characteristic picture and a Widal test may be of assistance.

The other affections to be differentiated with great care are actinomycosis, osteomyelitis, spondylolisthesis and aneurism of the aorta. The von Pirquet and subcutaneous tuberculin tests are valuable as a negative test in adults and as a positive test in children. The mistake is often made of confusing the pains of Pott's disease with so-called growing pains and so overlooking the graver affection.

In our series there were 33 males and 28 females; ages from 19 to 65 years. The situation of the disease as follows:

Cervical	3	5 per cent.
Dorsal	23	38
Lumbar	22	36
Dorso-Lumbar	3	5
Sacro-Iliac	8	13
Sacral	2	5
	61	

First symptom of disease noticed :

Pain in back	23
" " abdomen	9
" " hips and legs	8
" " lumbar region	6
" " sacro-iliac region	3
" " chest	2
" " head	1
" " kidney	1
Neck spasm	1
Sinus	1
Abscess	2
Kyphosis	2
Paralysis	2
	61

Those with disease situated in the lumbar or sacro-iliac region, with abscess, always had pain in the hip as the initial symptom, even if they also had other symptoms. Later, in the sacro-iliac cases, the pain was confined to the sacro-iliac joint. In one sacral case the first symptom was pain in the ankle. The initial pain in sacro-iliac cases was usually described as frightful.

All cases with abscess as a complication were lumbar. Paraplegia always occurred in dorsal disease.

Diagnosis was made in 22 cases on the x-ray ; in 19 cases on the formation of kyphus ; in 4 cases on paraplegia ; in 2 cases on back-pain and spasm ; in 5 cases, not mentioned. There were 11 cases in which paraplegia was present. This was reported relieved or cured in 5 cases.

Abscess occurred in 23 cases. Operations were performed in 19 cases ; Albee's in 13, Hibbs' in 4, bone graft (sacro-iliac) in 1, and exploratory in 1. Seeming benefit from an Albee bone graft is not yet determined.

Of cases with pulmonary tuberculosis there were 10. Pulmonary tuberculosis is not an obstacle to recovery as has been previously supposed, as 5 of the good results reported had pulmonary tuberculosis.

The duration from the first symptom to the termination of

treatment averaged for all cases treated, 4.19 years. This, of course, refers to treatment at the Massachusetts General Hospital. There were 22 cases of mistaken diagnosis, 5 of which were operated on as a result of the symptoms present, for something other than tuberculosis. Of the various mistaken diagnoses, 4 were gastro-intestinal, 4 were pleurisy, 2 were peri-nephritis, 3 were back strain, 2 were appendicitis, 2 were arthritis, 1 was osteomyelitis, 1 was transverse myelitis and 1 was sciatica.

Diagnosis was not made early in the lumbar cases because abscess, which is usually diagnostic, does not appear early. The lumbar cases, unless they develop abscess or have severe pain, are rather quiescent.

Of the 61 cases, 40 were heard from in 1915; 18 of these reported personally at the clinic and the others by letter. Two of the series have died, one of pneumonia ; 21 did not answer letters sent out. Of the 40 cases reporting, it was felt that sufficient time had elapsed in 27 to comment on the results. There were, good results 16, bad 4. In 7 the results were as yet undetermined, or the cases were progressing toward recovery.

Of the 16 good results, 8 had had plastic operations of the spine, 4 Albee's and 4 Hibbs'. The length of time required for recovery in the operative cases was on an average 2.29 years. The average length of treatment in the non-operative cases was 1.84 years.

Included in the 16 good results were 4 in which paraplegia had been present.

In the series the diagnosis was not made until an average of 2.2 years after the patients first felt the symptoms which later were known to be from the disease. Many of them were under observation in our clinic during this period when diagnosis was uncertain.

Of the 4 bad results, the first was in the lumbar region, with a large abscess. At last report, after four years' treatment, the abscess had healed but the patient was unable to walk without assistance. The second was in the cervical region, and after four years' treatment her condition was the same ; she was still wearing a Thomas collar. The third had pulmonary tuberculosis and was progressing badly until last year (1914), the third year under treatment, when she began to improve ; she is still bedridden. This case had a bone graft operation, the graft later sloughing out. The fourth had pulmonary tuberculosis also, was operated on, a bone graft being inserted in the spine ; she is steadily getting worse from the lung lesion.

The effect of a bone graft operation on the spine on the pain is remarkable in the relief it gives. It is very unusual the morning after an operation to find the patients uncomfortable, considering that they were in great pain previously. On the contrary, they invariably express great satisfaction for the relief afforded them.

CONCLUSIONS.

1. That the diagnosis of Pott's disease in adults is not as easily made as in children, there being conditions due to mature life that confuse.

2. Pulmonary tuberculosis is not an obstacle to recovery and seems to be benefited by both the operative and non-operative treatment.

3. Paraplegia as a complication disappears in 50 per cent. of the cases and does not recur.

4. Pott's disease originating in adult life is *not* a malignant process.

5. In this series, abscess always occurred in lumbar disease and paraplegia in dorsal.

6. Sacro-iliac tuberculosis is a disease of adult life.

Dr. J. R. Wellington said that the paper had been very interesting; he had little personal knowledge of this disease in adults. He had been surprised to hear the statement that the Albee operation in the cases studied did not give as good results as other methods of treatment. The paper was very instructive and should serve to put us on guard to think of tuberculosis as an explanation of some of the back pains of adults.

Dr. J. H. Selby said it was entirely a new idea to him that genuine tuberculosis of the spine could exist for as long as six months without giving rise to x-ray evidence; he had thought that such evidence would not be so long in appearing. He would certainly not have recognized the picture shown as syphilis of the spine; he himself was more familiar with the Charcot spine. He would have called the case shown in the picture hypertrophic arthritis.

Dr. Tom A. Williams said the paper was a very fertile one. As to early diagnosis, might not these cases be recognized earlier if a study were made of the finer sensibility? He had had an opportunity to study a number of cases before deformity appeared, and had published a case in which the disease was recognized by the detection of a radiculitis due to the tuberculous process. In the cases he had in mind, the early symptoms are mainly neural and the diagnosis should be approached from the neurologic standpoint.

Dr. Foley said, with reference to Dr. Wellington's remarks, that he had not intended to criticize the New York surgeons, but it happened that in the little series he had studied the non-operative cases had got well earlier than the operative cases. He replied to Dr. Selby that the idea that tuberculous processes may exist without x-ray evidence for as long as six months is based on the fact that children may have knee pain for six months with no x-ray evidence to explain it, and later develop clear cut bone

tuberculosis. The picture of syphilis of the spine may be rather unusual, but in most cases, and especially if congenital, the lesion is apt to be unilateral, and may be either a punching out or a building up process. He agreed with Dr. Williams as to the desirability of a thorough neurologic study of early inflammatory lesions of the spine.

WASHINGTON MEDICAL ANNALS.

Journal of the Medical Society of the District of Columbia.

Published Bimonthly by the Society, at No. 2114 Eighteenth Street, N. W., Washington, D. C. Subscription price, including postage, $1.00 per year, in advance. Single copies, 20 cents. Advertising rates given on application.

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Editorial.

HISTORY OF THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA.—Price $1.00, with 25 cents added if delivered in this city or sent by mail. Address Dr. C. W. Franzoni, 605 I Street, N. W. The books are in the custody of Dr. D. S. Lamb, at the Army Medical Museum.

THE WASHINGTON MEDICAL ANNALS, the official organ of the Medical Society of the District of Columbia, issued the first of January, March, May, July, September and November, will publish gratuitously such information of a medical, surgical and sanitary character, changes in personnel, &c., of hospitals, dispensaries, medical schools, medical societies and other medical agencies, as would be useful and interesting to the members of the Society. Address the Chairman of the Committee on Publication.

THE WASHINGTON MEDICAL ANNALS.—Back numbers.—Members of the Society who have back numbers of the ANNALS, and do not intend to preserve them, are requested to send them to the Chairman of the Publication Committee. Requests for such numbers are frequently received.

ADVERTISEMENTS.—Attention is invited to the advertisements in this issue. All the advertisers are reliable and responsible. It is suggested that they be given preference.

The 550 members of the Society by a little effort could largely increase the number of advertisements. Dr. Frankland is the member of the Committee on Publication who has charge of this matter.

THE OTHER MEDICAL SOCIETIES OF THE DISTRICT OF COLUMBIA.

Clinical Society.—Officers: F. L. Biscoe, President; W. J. Mallory, Vice President; E. P. Copeland, Secretary-Treasurer; Censors: L. A. Johnson and J. D. Thomas.

Clinico-Pathological Society.—Active membership limited to 25. Inactive membership: those who have withdrawn from active membership after fifteen years. A limited honorary membership of eminent medical men. Meets on the first and third Tuesdays of the month from October to May, inclusive. Officers: President, G. Brown Miller; Vice Presidents, Loren Johnson and H. H. Kerr; Secretary and Treasurer, B. M. Randolph.

Emergency Hospital Club.—The club was organized early in 1915 by the members of the Staff of the Central Dispensary and Emergency Hospital. Meetings are held on the second Saturday of each month from September to May, inclusive; the officers are ——— ———, President; W. B. Carr, Vice President; D. W. Prentiss, Secretary and Treasurer.

Freedmen's Hospital Medical Society.—Meets on the second Wednesday of each month from October to May, inclusive. Composed of physicians connected with the Staff of the Hospital and the Medical Faculty of Howard Medical School. Collins Marshall, President; C. A. Brooks, Vice President; C. A. Allen, Secretary-Treasurer.

Galen Society of the District of Columbia.—Carl Henning, President; W. D. Tewksbury, Secretary-Treasurer. The membership is limited to twenty-five. The Society meets on the third Monday of each month from October to May.

Georgetown Clinical Society; twenty-five active members, limited to graduates of the Medical Department of Georgetown University. Meets at the University Club on the third Tuesday in the month. John Foote, President; J. Russell Verbrycke, Jr., Treasurer.

Georgetown University Medical Society.—Meets on the fourth Saturday of the month at the University Hospital. The membership consists of the Alumni, Faculty and Senior Students of the Medical School. J. A. Gannon, President; T. F. Lowe, Vice President; J. M. Moser, Secretary-Treasurer.

George Washington University Medical Society.—Organized 1905; membership limited to Alumni of School and Members of the Faculty. Meets in the Medical Building on the third Saturday of each month from October to May. President, E. P. Copeland; Vice President, W. H. Huntington; Treasurer, E. G. Seibert; Secretary, C. B. Conklin; President's Council, J. B. Nichols, W. W. Wilkinson, A. L. Hunt, J. Lawn Thompson, John Van Rensselaer. Active membership, 162.

Hippocrates Society; membership limited to 25, with voluntary retired members after 10 years; meets on the second Thursday of the month from October to May. Officers for the year: J. R. Verbrycke, Jr., President; C. A. Simpson, Secretary.

Medical History Club of Washington, D. C.—Officers: President, Frank Baker; Vice President, H. W. Lawson; Secretary, F. J. Stockman; Executive Committee, J. H. Bryan, Howard Hume, W. J. Mallory and the Officers. Members: Truman Abbe, Frank Baker, W. C. Borden, Joseph H. Bryan, G. Wythe Cook, John Foote, F. H. Garrison, Howard Hume, H. W. Lawson, W. J. Mallory, John B. Nichols, P. S. Roy, F. J. Stockman, I. S. Stone, John D. Thomas, Wm. A. White.

Medical and Surgical Society of the District of Columbia.—President, Wm. F. Sowers; Vice President, J. T. Kelley; Secretary and Treasurer, L. Eliot; Asst. Secretary, H. H. Kerr; Executive Council, John Dunlop, L. C. Ecker, H. G. Fuller, L. H. Reichelderfer and Eliot.

Society of Medical Jurisprudence, Washington, D. C.—President, Dr. D. P. Hickling; Vice President, J. M. Kenyon; Secretary-Treasurer, Spencer Gordon. Meets on the second Monday of each month from October to June at University Club. Has from forty to fifty members.

Society of Ophthalmologists and Otologists, Washington, D. C., meets the third Friday of each month from October until May, inclusive. Officers: President, A. H. Kimball; Vice President, Mead Moore; Secy.-Treasurer, Carl Henning, The Rochambeau.

Active members: A. B. Bennett, Jr., J. W. Burke, V. Dabney, W. T. Davis, L. S. Greene, C. M. Hammett, Carl Henning, W. H. Huntington, E. B. Jones, A. H. Kimball, R. S. Lamb, F. B. Loring, O. A. M. McKimmie, W. B. Mason, M. E. Miller, Mead Moore, S. B. Muncaster, W. S. Newell, J. J. Richardson, G. S. Saffold, E. G. Seibert, E. A. Taylor, R. R. Walker, W. A. Wells.

Inactive members: J. H. Bryan, W. K. Butler, Wm. H. Fox, W. P. Malone, H. A. Polkinhorn, C. W. Richardson, D. K. Shute, W. H. Wilmer.

Associate Member: T. C. Lyster, U. S. Army.

SOCIETY FOR MENTAL HYGIENE of the District of Columbia.—Board of Directors: Miss Cornelia Aldis, Surg. Gen. Rupert Blue, P. H. S., Gen. L. E. Coffer, Chief Justice J. H. Covington, Frederick A. Fenning, Lieut. Col. H. C. Fisher, U. S. A., Dr. D. Percy Hickling, Mrs. Archibald Hopkins, Dr. Loren B. T. Johnson, Miss Bessie Kibbey, Dr. George M. Kober, Miss Julia Lathrop, Dr. Frank Leech, Mrs. John McLaughlin, Hon. Stephen P. Mather, Mrs. Wesley Merritt, Mrs. Seaton Perry, Miss Janet Richards, Hon. Cuno H. Rudolph, Mrs. Geo. H. Schiebly, Miss Nellie Sedgley, Mrs. Henry G. Sharp, Mrs. George Sutherland, Mrs. Carl Vrooman, Rev. Dr. W. R. Wedderspoon, Mrs. Norman Williams, Dr. Wm. A. White, Hon. Simon Wolf, Dr. Wm. C. Woodward, Mrs. Paul Worburg.

President, Gen. Rupert Blue; Vice President, Cuno H. Rudolph; Treasurer, Miss Nellie Sedgley; Dr. Wm. A. White, Chairman Executive Committee; Dr. D. Percy Hickling, Secretary. Chief objects of the committee: To work for the conservation of mental health; for the prevention of mental disease and mental deficiency and for the improvement in the care and treatment of those suffering from nervous or mental diseases or mental deficiency.

SOCIETY OF SOCIAL HYGIENE, Washington, D. C.—President, Dr. Charles F. Stokes, U. S. Navy; Secretary, Lt. Col. J. R. Kean, U. S. Army, Surgeon General's Office. The Society has four committees, namely: Education, Venereal Diseases, Protection of Women and Children, and Psychopathology. Yearly dues, $1.00. Persons desiring to become members should address Col. Kean and state to which committee they wish to be assigned.

THERAPEUTIC SOCIETY of the District of Columbia.—Meets at the G. W. School of Pharmacy, 808 I Street, N. W., on the first Saturday in each month. G. W. Latimer, President; A. P. Tibbets, Secretary.

WALTER REED MEDICAL SOCIETY meets on the fourth Thursday of every other month, from September to May inclusive. Composed of physicians located in the eastern part of Washington. J. S. Arnold, President; H. R. Schreiber, Vice President; M. H. Prosperi, Secretary; N. E. Webb, Treasurer.

WASHINGTON MEDICAL AND SURGICAL SOCIETY.—President, N. D. Graham; Vice President, R. R. Walker; Secretary, Walter Van Sweringen; Treasurer, F. E. Gibson; Curator and Librarian, E. H. Egbert; Executive Committee: L. H. Taylor, Chairman, G. S. Clark, G. S. Barnhart; Program and Auditing Committee: Wm. A. Jack, Jr., Chairman, J. R. Nevitt, Walter Van Sweringen; Membership Committee: F. E. Gibson, Chairman, Wm. P. Reeves, Caryl Burbank.

WASHINGTON OBSTETRICAL AND GYNECOLOGICAL SOCIETY. —President, J. F. Moran; Vice Presidents, G. B. Miller, Prentiss Willson; Secretary, Truman Abbe; Treasurer, D. W. Prentiss. Retired members—G. N. Acker, S. S. Adams, E. A. Balloch, J. W. Bovée, W. S. Bowen, W. P. Carr, G. Wythe Cook, M. F. Cuthbert, H. D. Fry, J. T. Johnson, D. G. Lewis, A. R. Shands, E. E. Morse, Elmer Sothoron, J. Ford Thompson, John Van Rensselaer.

WASHINGTON PSYCHOANALYTIC SOCIETY.—Meets the second Saturday of each month, from October to May, inclusive. Officers: President, Edward J. Kempf; Vice President, Robert Sheehan, U. S. N.; Secretary and Treasurer, Dr. Mary O'Malley. Program Committee: Robert Sheehan, U. S. N., Dr. D. Percy Hickling and John E. Lind.

WASHINGTON SOCIETY OF NERVOUS AND MENTAL DISEASES. —President, Wm. H. Hough; Vice President, Bernard Glueck; Secretary, J. J. Madigan. The Society has a limited membership of thirty, but welcomes Physicans and Surgeons interested in Neurology and Psychiatry. Meets monthly on the third Thursday at the Cosmos Club or a member's residence.

THE WASHINGTON SURGICAL SOCIETY.—Meets at 1621 Conn. Ave. the third Friday of the month at 8 P. M. The officers are H. A. Fowler, President; D. W. Prentiss and Walter Webb, Vice Presidents; H. G. Fuller, Secretary, and J. A. Gannon, Treasurer. Members of Council, H. D. Fry, J. F. Moran and the officers.

WOMEN'S MEDICAL SOCIETY of the District of Columbia. —President, Emma Lootz Erving; Vice President, Louisa M. Blake; Secretary and Treasurer, Martha M. B. Lyon; Corresponding Secretary, Mary Holmes.

THE SECRETARIES of the other Medical Societies of this District are reminded that the ANNALS will publish the schedules of their meetings.

AMENDMENTS TO THE CONSTITUTION AND BY-LAWS.—The following amendments have been made since the publication in Volume XII, March, 1913.

Constitution.—Article V, Section 4, adopted Nov. 4, 1914: before the words "Due notice" on page 142, insert "No application for membership that is rejected or withdrawn shall be renewed until after two years from the time of its rejection or withdrawal."

Section 10, same article; adopted Jan. 7, 1914: for "two years" substitute "one year." At the end of the section, add the words "Members so dropped may, after report by the Committee of Censors, be reinstated by the Society upon the payment of arrears in dues." Adopted March 1, 1916.

Article VI, Section 5, adopted Jan. 6, 1915: in the last line, for "two" substitute "three."

Article VIII, Section 2, page 148, 4th line from top: for the word "disorders" substitute the word "diseases."

Article IX, Section 2, first line, for the word "four" substitute "five." Adopted March 1, 1916.

By-Laws.—Article VIII, Section 9, page 153, adopted Jan. 7, 1914: No member of the Staff of any hospital receiving patients in private rooms shall attend such private patient sent to the hospital by a member of the Society, not a member of the Staff, unless specifically requested to do so by the attending physician.

Please note that the figures in Sections 7 and 8 of this article, instead of being 7 and 8 should be 5 and 6.

SOME SPECIAL COMMITTEES OF THE SOCIETY:

On First Aid Conference.—Drs. C. S. White, H. H. Kerr and W. P. Reeves.

On National Legislative Committee.—Dr. L. B. T. Johnson.

On Regulation for Control of Contagious Diseases.—Drs. Frank Leech, H. H. Donnally, S. S. Adams, W. C. Woodward, N. P. Barnes, J. S. Wall and L. B. T. Johnson.

On Meeting Place of Society.—Drs. G. Wythe Cook, A. B. Hooe, A. L. Hunt, A. R. Shands and J. D. Thomas.

On American Red Cross.—Drs. L. H. Reichelderfer, L. B. T. Johnson and A. L. Hunt.

Memorial Committees.—On the death of Dr. Winter: Drs. Lemon, Holden and Sorrell. On the death of Dr. Lynch: Drs. Kinyoun, Frank Leech and W. C. Fowler. On the death of Dr. Bishop: Drs. Roy, Stone and Malone. On the death of Dr. Walker: Drs. Ecker, Waters and Cole.

Centennial Committee.—Dr. Nichols, Chairman; Drs. D. S. Lamb, G. Wythe Cook, Roy, W. P. Carr, Kober, Boswell, Tayler-Jones, Macatee, S. S. Adams, Chas. Richardson, Hunt, A. B. Hooe, J. D. Thomas and Frank Hagner.

Committee on Cancer.—Drs. Karpeles, Frank Hagner, Balloch, W. C. Borden, W. P. Carr, Vaughan, J. F. Mitchell, Sprigg, C. W. Richardson, Gannon and Abbe.

Committee of the District of Columbia on Medical Preparedness.—G. T. Vaughan, Chairman; E. Y. Davidson and H. C. Macatee, *ex officio;* S. S. Adams, J. W. Bovée J. F. Mitchell, J. J. Richardson, I. S. Stone and W. H. Wilmer.

STARMONT SANATORIUM.—Gen. Sternberg's Home for Treating Tuberculosis.—The attention of the members of the Society is called to this purely philanthropic enterprize. General Sternberg was the originator and founder of this institution, and your earnest solicitation is requested in furthering the good work of this undertaking by referring patients to the Sanatorium. Incipient and moderately advanced cases are accepted. The rates

vary from $12.50 to $20, depending upon the condition of the patient, the quarters and necessary service. Full data will be forwarded on application. Phone connection. Address Dr. L. F. Kebler, Washington Grove, Md.

AMERICAN MEDICAL EDITORS' ASSOCIATION.—Annual meeting, October 25 and 26, at the McAlpin Hotel, New York City. Officers: Dr. E. C. Register, *Charlottee* (N. C.), *Medical Journal*, President; Dr. W. A. Jones, *Journal-Lancet*, Minneapolis, Minn., First Vice President; Dr. G. M. Piersol, *American Journal Medical Sciences*, Philadelphia, Pa., Second Vice President; Dr. J. McDonald, Jr., *American Journal Surgery*, New York City, Secretary and Treasurer.

THE NATIONAL BOARD OF MEDICAL EXAMINERS OF THE UNITED STATES.—The need of a standard medical examining body for the whole United States and its Territories (tributary thereto) has occasioned the organization of The National Board of Medical Examiners. It is a voluntary board, the members of which are selected from the Medical Corps of the Army, the Navy, and the Public Health Service, the Federation of State Examining Boards, and other representative organizations, and the medical profession of the United States. The aim of this Board is to establish a standard of examination and certification of graduates in medicine, through which, by the coöperation of the individual Boards of Medical Examiners, the recipients of the certificates of the National Board of Medical Examiners may be recognized for licensure to practice medicine. The policy of the Board is to conduct its examinations on a broad scientific basis of such a high yet practicable standard that the holders of its certificates will receive universal recognition. The independent action by the Board is furthered by the financial and moral support of the Carnegie Foundation. The Board consists of the following members: Surgeon General W. C. Braisted, U. S. N., President; Colonel Louis A. LaGarde, U. S. A., Ret., Treasurer; Surgeon General W. C. Gorgas, U. S. A.; Surgeon General Rupert Blue, U. S. P. H. S.; Medical Director E. R. Stitt, U. S. N.; Assistant Surgeon General W. C. Rucker, U. S. P. H. S.; Dr. Herbert Harlan, Federation of State Medical Examining Boards; Dr. Isadore Dyer, New Orleans, La.; Dr. Victor C. Vaughan, Ann Arbor, Mich.; Dr. Henry Sewall, Denver, Col.; Dr. Louis B. Wilson, Rochester, Minn.; Dr. E. Wyllys Andrews, Chicago, Ill.; Dr. Horace D. Arnold, Boston, Mass.; Dr. Austin Flint, New York, N. Y., and Dr. J. S. Rodman, Secretary, 2106 Walnut Street, Philadelphia, Pa. The official domicile of the Board is Washington, District of Columbia.

SPECIAL LABORATORY OR CLINICAL WORK.—Members of the Society who are doing special work, laboratory or clinical, are requested to send name and subject to the Editor. This is not

for publication, but for information and reference. Thus, a number of members are doing x-ray work; some limit their practice entirely or mainly to a specialty. The Editor is frequently asked in regard to these things and is unable sometimes to answer satisfactorily.

Medical Corps, U. S. Navy.—The next examination for appointment in the Medical Corps of the Navy will be held on or about October 23, 1916, at Washington, D. C., Boston, Mass., New York, N. Y., Philadelphia, Pa., Norfolk, Va., Charleston, S. C., Great Lakes (Chicago), Ill., Mare Island, Cal., and Puget Sound, Wash. Full information with regard to the physical and professional examinations, with instructions how to submit formal application, may be obtained by addressing the Surgeon General of the Navy, Navy Department, Washington, D. C.

Medical Preparedness.—Advisory Committee of Civilian Physicians and Surgeons: Wm. J. Mayo, Rochester, Minn., Chairman; F. F. Simpson, Pittsburgh, Pa., Secretary. Object, through coöperation with the public services to establish an organization to make a comprehensive survey of the medical resources of the country available for use in peace and war; to include the names of medical men available for home or field duty, who are trained in the specialties of medicine, surgery and sanitation; also the equipment of medical institutions; facilities of transportation of sick and wounded; food and drug supplies; lists of trained nurses, &c. Also to aid in the care of sick and wounded and in the elimination of preventable diseases. The members of the committee for the District of Columbia are as follows: G. T. Vaughan, Chairman; E. Y. Davidson and H. C. Macatee, *ex officio*; S. S. Adams, J. W. Bovée, J. F. Mitchell, J. J. Richardson, I. S. Stone and W. H. Wilmer.

Alcoholism and Inebriety.—A Research Foundation has recently been organized at Hartford, Conn., for the purpose of making an exact scientific study of this question. It will be endowed and become a permanent work. Preliminary studies have already begun, and practicing physicians from all parts of the country are appealed to for the records and histories of cases which will be compiled and tabulated for the purpose of determining the laws which control and govern them.

This is the first scientific effort to take up the subjects of alcoholism and inebriety and determine the causes which produce them outside of alcohol. Science has shown that these conditions are governed by exact physical and psychical laws, which if known and understood would indicate the most practical means and measures of relief.

The foundation will be practically a laboratory or clearing

house, where persons can come for examination, counsel and advice. To a large class of persons who want something more than pledges, appeals or sanatorium treatment, this will open a new field of means and measures for relief that will be most welcome.

Correspondence is earnestly solicited from the profession. Address Dr. T. D. Crothers, Hartford, Conn.

Victor Electric Corporation, Jackson Boulevard and Robey Street, Chicago, Ill.—Announcement has just been made of the formation of a new corporation called the Victor Electric Corporation, which has purchased the business of the following firms:

Victor Electric Company, Jackson Boulevard and Robey Street, Chicago, Ill.; 110 E. 23d St., New York City, N. Y.

Scheidel-Western X-Ray Company, 737 West Van Buren St., Chicago, Ill.; 110 East 23d St., New York.

Macalaster-Wiggin Company, 66 Broadway, Cambridge, Mass.; 154 West Lake St., Chicago, Ill.; 110 East 23d St., New York.

Snook-Roentgen Mfg. Company, 1210 Race St., Philadelphia, Pa.; 110 East 23d St., New York.

The purpose of the new corporation is to continue the respective business policies of the above-mentioned concerns, and by the elimination of waste and the development of coöperative service, be better able to serve more efficiently the interests of the medical profession.

The Public Health Service Asks, Do you know that intelligent motherhood conserves the nation's best crop?

Heavy eating like heavy drinking shortens life?

The registration of sickness is even more important than the registration of deaths?

The U. S. Public Health Service coöperates with State and local authorities to improve rural sanitation?

Many a severe cold ends in tuberculosis?

Sedentary habits shorten life?

Neglected adenoids and defective teeth in childhood menace adult health?

A low infant mortality rate indicates high community intelligence?

The hand that carries food to the mouth can also carry disease germs?

Health first is the highest form of safety first?

Tuberculosis and poverty go hand in hand?

The U. S. Public Health Service will send a booklet on flies and disease, gratis to any applicant?

The breast-fed baby has the best chance?

Physical fitness is preparedness against disease?

Pneumonia is a communicable disease?

Cockroaches may carry disease?

Do you clean your teeth and then expectorate in the wash-bowl?

Omit lunch to reduce weight and then overeat at dinner?

Go to the country for health and then sleep with your windows shut tight?

Wonder why you have earache and then blow your nose with your mouth shut?

Think dog muzzling cruel and then marvel at the spread of rabies?

Carefully select your brand of liquor and then feed your children unpasteurized milk?

Repeat the Golden Rule and then sneeze in somebody's face?

Go camping for your health and then place your toilet so that it drains into your water supply?

American Association for the Study and Prevention of Infant Mortality.—Annual meeting at Milwaukee, Wis., October 19 to 21. Headquarters at the Hotel Wisconsin. President, W. C. Hamill, Philadelphia. W. C. Woodward of this city is President-elect for 1917.

United States Public Health Service.—Congress has recently made an appropriation for 33 additional Assistant Surgeons in the United States Public Health Service. These officers are commissioned by the President and confirmed by the Senate. The tenure of office is permanent, and successful candidates will immediately receive their commissions.

After four years' service Assistant Surgeons are entitled to examination for promotion to the grade of Passed Assistant Surgeon. Passed Assistant Surgeons after twelve years' service are entitled to examination for promotion to the grade of Surgeon.

Assistant Surgeons receive $2,000, Passed Assistant Surgeons $2,400, Surgeons $3,000, Senior Surgeons $3,500, and Assistant Surgeon-Generals $4,000 a year. When quarters are not provided, commutation at the rate of $30, $40 and $50 a month, according to the grade, is allowed.

All grades receive longevity pay, 10 per cent. in addition to the regular salary, for every five years up to 40 per cent. after twenty years' service.

Examinations will be held every month or so in various cities for the convenience of candidates taking the examination. Further information will be furnished by addressing the Surgeon-General, United States Public Health Service, Washington, D. C.

Oatmeal.—A lady once asked a physician what was good for her complexion. He told her to use oatmeal. "Do you mean rub it on?" she said. "Yes," replied the physician, "rub it on and rub it in—swallow it."—*Good Health.*

RECENT PUBLICATIONS OF PHYSICIANS IN THE DISTRICT OF COLUMBIA.

Truman Abbe; Case of congenital amputation of fingers; *Amer. Jour. Obstet.*, June.

W. M. Barton; Manual of vital function testing methods and their interpretation; Reviewed in *Cal. State Jour. Med.*, July, 298.

J. M. Buck; Multiple pipet for complement fixation test; *Jour. Infect. Dis.*, August.

W. M. Clark and H. A. Lubs; Hydrogen electrode potentials of phthalate phosphate and borate buffer mixture; *Jour. Biol. Chem.*, July.

R. H. Creel and F. M. Faget, P. H. S.; Cyanide gas for the destruction of insects; Reprint 343 from Pub. Hlth. Repts., June 9.

H. A. Fowler; Remarks on the diagnosis of renal and ureteral calculi; *Maryland Med. Jour.*, August, 183.

Carroll Fox, P. H. S.; Public Health administration in Florida; Reprint 340 from Pub. Hlth. Reports, June 2.

F. H. Garrison; The Index Catalogue and Index Medicus; *Jour. A. M. A.*, July 22, 307.

Milton Hahn; Thumbs up; *Med. Pickwick*, June, 214.

H. H. Hazen; Skin cancer; Reviews in *Buffalo Med. Jour.*, August, 22, *Pacific Med. Jour.*, August, 507; and *Illinois Med. Jour.*, July, 80.

A. Hrdlicka; Goiter among the Indians along the Missouri; *Science*, Aug. 11, 203.

W. H. Huntington; Case of mastoiditis complicated by purulent cerebro-spinal meningitis; operation and recovery; *Jour. A. M. A.*, July 15, 201.

H. W. Kearney; Surgical mortality from the standpoint of the anesthetist; *Amer. Jour. Surg.*, July, 66.

A. C. Klebs; Leonardo da Vinci's scientific research of vascular system; *Boston Med. and Surg. Jour.*, July, 13.

D. S. Lamb; Reflection of a skeleton; *Med. Pickwick*, June, 207.

L. L. Lumsden, P. H. S.; Report on typhoid fever in Birmingham, Ala., with recommendations for its eradication; *South. Med. Jour.*, August, 711.

H. McCulloch; Electrocardiographic studies of congenital heart disease; *Amer. Jour. Dis. Child.*, July.

C. M. McBryde; Letter of Edward Jenner containing brief account of his discovery of vaccination; *Bull. Johns Hopk. Hosp.*, June.

R. B. Miller, U. S. A.; New field belt for medical officers; *Mil. Surg.*, June.

J. F. Moran; The management of occipito-posterior positions, with report of cases; *Va. Med. Semi-Mo.*, July 21, 183.

E. L. Munson, U. S. A.; Proper functions of Medical Department in relation to general staff work; *Mil. Surg.*, June.

E. M. Parker and S. D. Breckenridge; Surgical and gynecological nursing. Review in *Jour. Kansas Med. Soc.*, July, 209.

C. W. Richardson; Tonsillectomy in the adult, are we justified in doing so many indiscriminate tonsillectomies for remote infections; *Va. Med. Semi-Mo.*, Aug. 11, 220. Also, Abscess of lung following operation on tonsils, &c.; *Laryngoscope*, July.

J. L. Riggles and J. E. Lind; The possible etiology of pelvic disease in epilepsy, with report of cases; *Va. Med. Semi-Mo.*, July 7, 161.

L. A. Round; Comparative bacteriologic examination of shell, liquor and meats of oyster; *Amer. Jour. Pub. Hlth.*, July.

W. C. Rucker, P. H. S.; Wm. Budd, the pioneer epidemiologist; *Bull. Johns Hop. Hosp.*, July. Also, Relations of U. S. Pub. Hlth. Service to First Aid; *Mil. Surg.*, June.

W. Salant and A. E. Livingston; Experiments with oil of chenopodium and cardiac stimulants on isolated frog heart; *Amer. Jour. Physiol.*, July; abstracted in *Jour. A. M. A.*, July 22, 316.

E. B. Vedder, U. S. A.; Starch agar, useful culture medium; *Jour. Infect. Dis.*, May, 1915; abstracted in *Pathologia*, Genoa, July 1, 1916, 220.

J. R. Verbrycke, Jr.; Indicanuria, a study of 100 consecutive cases; *Maryland Med. Jour.*, August, 191.

B. S. Warren, Edgar Sydenstricker and J. W. Schereschewsky; Health of garment workers; Reprint 341, Pub. Hlth. Reports, May 26.

M. I. Wilbert, P. H. S.; Poisons and Habit-forming drugs; Reprint 330, Pub. Hlth. Reports, February and March.

R. R. Williams; Chemical nature of vitamines, antineuritic properties of hydroxypyridines; *Jour. Biol. Chem.*, July.

T. A. Williams; Workmen's compensation for neuroses following accident; *West. Med. Times*, August, 53.

W. H. Wilmer; Three years' experience in sclerocorneal trephining in glaucoma; *Arch. Oph.*, July.

PERSONAL NOTES.

Dr. T. A. Ashby; Honorary member of this Society, died June 26. See for obituary notice *Maryland Medical Journal*, August, page 203.

Dr. W. A. Bloedorn, U. S. Navy, Associate member of this Society; detached from Navy Yard, Washington, to the *Kentucky*.

Dr. P. T. Dessez, U. S. Navy, ordered to Navy Yard, Washington.

Dr. A. E. Eisenberg of Army Medical Museum, resigned, has located at Cleveland, Ohio; Pathologist of Charity Hospital.

Dr. Bernard Glueck, late of the Government Hospital for Insane, has been appointed to a position at Sing Sing, N. Y.

Drs. T. A. Groover and A. C. Christie announce their association for the practice of Roentgenology, with offices at 1621 Conn. Av., N. W.

Dr. James A. Halpin, of Washington, has been appointed to the Naval Medical Corps.

Mrs. Helen A. Howard, widow of Dr. Flodoardo Howard, died July 27.

Dr. Ales Hrdlicka, of the National Museum, has been made a corresponding associate of the Acad. Nacional di Historia of Colombia.

Dr. J. J. Kinyoun is reported to have been appointed as Health Officer at Winston Salem, N. C.

Dr. Samuel E. Lewis has been reëlected Secretary-Treasurer of the Association of Medical Officers of the Army of the Confederacy.

Dr. D. M. McPherson has been made "An original companion in the Order of Indian Wars of the United States" because of his service against the hostile Apaches.

Dr. Wm. Robert Perkins was married to Miss Ethel Mae Fausett, of this city, July 15.

Dr. B. G. Pool's wife, Fannie Chase Pool, died August 10.

Dr. T. W. Richards, U. S. Navy, has been transferred to the Military Relief Division of the American Red Cross.

Dr. C. W. Richardson attended the meeting of the Amer. Laryngological Association, read a paper, and took part in discussion.

Dr. Francis Sorrel, M. D., 1848, Univ. Penna., age 89; Asst. Surg., U. S. A., 1849–56; a member of the legislature of California, 1860–1; a medical officer in the Confederate army and Medical Director of military hospitals in Richmond, Va., died in this city June 30.

Mrs. Thomasin J. Stone, wife of Dr. Isaac S. Stone, died August 19 in this city. Interment at Lincoln, Va.

Dr. A. P. Upshur, Capt., Med. Corps, U. S. A., was married, June 15, to Amelie Augustin McAlister, of this city.

Dr. E. B. Vedder, Capt., Med. Corps, U. S. A., attended the meeting of the Amer. Assn. Immunologists in this city May 11–12, and took part in discussion.

Dr. Francis Joseph Woodman died July 28 in this city, age 64. An M. D., 1885, National Med. College; Fellow of the A. M. A.; an employee of the U. S. Pension Bureau, and a medical officer of the local National Guard, 1899–1909.

Vol. XV. NOVEMBER, 1916. No. 6.

WASHINGTON
MEDICAL ANNALS

ROENTGENISM.—ROENTGENIZATION IN DEEP-SEATED BENIGN AND MALIGNANT DISEASES.

Report of Three Cases: 1. Menopausic Metrorrhagia. 2. Inoperable Uterine Carcinoma; 3. Metastatic Carcinosis Following Primary Mammary Adeno-Carcinoma.

By Charles A. Pfender, M. D.,

Washington, D. C.

Roentgenism is the untoward effect of x-rays upon the human organism. It was only a few years ago when deep roentgen therapy emerged from a transitional period of sad oblivion and woeful inefficiency to a higher standard of recognition achieved largely through boldness exercised by a few scientific workers. Up to this time, however, the methods in vogue for administering massive doses of x-rays had proved more deterrent than encouraging to the patients, and very few indeed hailed roentgenization as a possible *sine qua non.*

The supercerebration induced during a visit at the roentgen therapist's establishment was usually provocative of accentuation of physical discomfort, inculcative of vague perceptions of escharotic cosmetic disfiguration, and, in the more evanescent patients, engendered a feeling akin to spiritual unpreparedness quickened by the haunting fear that some horrible calamity might befall the apparatus at any moment and hurl patient, doctor and dynamo to regions where the fire is never quenched nor the worm ever ceases to turn.

Today practically all the factors which contributed to this undesirable state have been removed. In the early days of roentgen therapy it was imperative in many instances to subject the patients to many hours of roentgenization day after day before sufficient x-rays were administered, and at that it was by no means certain that the superficial penetration obtained in those days would prove of any curative value. This largely explains

so many failures during that period. It was also frequently necessary to exert considerable pressure over the area treated—especially in persons inclined to corpulency—so that the thickness or depth through which the x-rays had to penetrate would be reduced to the smallest possible minimum. Such pressure as this, when prolonged for many minutes, was not only painful, but in some instances injurious. In a case of fibroids which I treated several years ago, when it was still necessary to resort to great pressure, a pseudoparalysis of both nether extremities occurred which lasted for two days. No doubt the hysterical condition of the patient contributed largely to the severity of the symptoms, nevertheless I was the subject of profound pessimistic reflections before my patient thought herself sufficiently well to greet me walking about again.

The development of the present roentgen therapist's armamentarium has been gradual, and it was not until 1913 that the principal factors above mentioned were finally eliminated. The invention of the Coolidge tube has played a greater part than any other adjunct in making intensive roentgen treatments for extensive carcinosis, metropathies, fibroids and similar conditions, a comfortable visit, besides increasing the effectiveness of roentgenization.

The constant intensity and deep penetration of the Coolidge tube, its property to withstand great heat and long continued electrical charges without any appreciable impairment of the tube, has reduced the duration of treatments by more than two-thirds of the time formerly required, has removed the necessity of undue pressure, and has proved more efficient in its results than any other device known at the present time. The suppression of the sparking and other startling noises associated with the operation of a dynamo has greatly reduced the disquieting influences to which some patients are hypersusceptible.

In heavy roentgen therapy the division of a treatment into a number of applications on different days may be advisable, but where this is not practicable, as in cases coming from a distance, for instance, all the necessary roentgen rays may be given on the same day and usually without any appreciable discomfort to the patient. Eight to sixteen massive doses (120 to 400 X Kienboeck units) are frequently administered in an hour or two and cause no undue fatigue or discomfort to the recipient. The amount of time required depends somewhat on the condition of the patient, the technique of the operator and the capacity of the equipment. The most powerful transformer is not too large for the work required, and it is only the quite recent machines which have a back-up parallel spark of 10–15 inches. My personal experiences in different installations equipped with Coolidge tubes compare favorably with the reports of other operators using machines of similar capacity.

For purposes of illustration let us assume that a case of carcinoma uteri is to be treated over ten different portals of entry. Assuming that the distance from the skin to the focus of the tube is seven inches, the spark gap 9 to 10 inches, the filter three millimeters of aluminum and one piece of sole leather, while six milliampères of current are carried through the tube for six minutes, the result will be about 25 to 30 X Kienboeck units, depending somewhat on the variations encountered in different services. Ten such applications would require ten times six, or sixty minutes of constant applications of roentgen rays. To this we should add the time required for changing the focus area of the tube after every dose, and this takes from three to five minutes. If we accept four minutes as the average we have ten times four, or forty minutes, which are to be added to the sixty minutes of constant treatment, a total of 100 minutes, or one hour and forty minutes. In feeble and easily fatigued patients it is advisable to grant a rest of half an hour or more from time to time whenever this is practicable. The extent and the location of the lesion usually determine the number of applications required. In some cases only a few doses will be sufficient, whereas large areas may need as many as 18 to 24 applications. The results with water-cooled tubes have been very encouraging, I admit, but in heavy work I find that these tubes require frequent change, cannot deliver a high secondary current output for a sufficient length of time and, in addition, subject the operator to much worry and inconvenience in his attempt to maintain the maximum efficiency.

In pelvic or abdominal cases such as fibroids, inoperable uterine carcinoma, metrorrhagia, rectal sarcoma, inoperable gastric carcinoma, preoperative and postoperative mammary malignancy, and allied conditions, the Coolidge tube proves of inestimable service in roentgen therapy. In surface lesions such as exophthalmic or colloidal goiter, skin cancer, lupus, bone lesions, keloids, tuberculous glands, etc., the standard water-cooled tubes will serve admirably well, but the water reservoir frequently makes it difficult to focus the tubes properly upon the lesion that requires treatment.

Constitutional Effects.—Both the immediate and the remote effects of roentgenization vary in different individuals. The majority of patients experience no untoward immediate effects in any way, nor do they experience any special beneficent constitutional effects no matter how many X units are administered. Some patients come to the treatment room with preconceived ideas that they are about to encounter everything but pleasant happenings and in their imagination they have already associated a roentgen treatment with nothing less than a burn of the third degree. In the light of our present knowledge we can now assure the patients that with the protective methods in vogue a serious

burn need no longer be feared. A marked erythema or even blistering of the skin in the treatment of carcinomatous cases of marked malignancy is quite permissible and justifiable, and such a reaction is not a burn but simply a roentgen dermatitis which promptly heals.

A certain class of patients express themselves greatly exhilarated by roentgenization and state that this period of exaltation persists from 8 to 24 hours and even longer. These patients can hardly wait their next treatment. Recently I had occasion to observe the most pronounced sedative effect following, and even during the treatment of an exceedingly desperate case of exophthalmic goiter. The application of the roentgen ray was most effective in its immediate and temporary result in making the patient comfortable, but was applied too late to prove of any remote result. The patient was a martyr to so-called Christian Science and came under my observation when it was too late.

Others, again, experience drowsiness and even fall asleep during the treatment ; after the treatment they may remain drowsy all day long. A few become excited and may suffer from insomnia for one or more nights after treatment. We encounter still another class, which the German authors place in the category of the "morning after the night before," and designate it "Roentgenkater." The term "Katzenjammer" is probably familiar to some of you at least and is closely allied to this condition. These patients complain, sometimes while still undergoing treatment, or within a few hours afterwards, of headache, pains in the back, and nausea, but rarely ever vomit. They describe it as similar to sea or carsickness, and married women have stated that their attacks were similar to those experienced by them during the early months of gestation. This syndrome may last one or four days, rarely a week, but in the majority of cases in which this phenomenon occurs at all it usually disappears after a night's sleep.

What is the probable cause of these temporary systemic disturbances? An observation made by Krinski is worthy of mention in this connection. He found that when he administered 400 X units or less, whether in one treatment or in small repeated treatments, these symptoms invariably occurred. Whenever he exceeded this dosage, however, the described symptom-complex failed to appear. This leads one to conclude that this supplementary effect of the roentgen ray, namely the "Roentgenkater," would be prevented when more than 400 X-units are administered at the first roentgenization. The conjecture is that in small dosage, *i. e.*, less than 400 X units, irritative conditions or reactions are incited which resist roentgenization and give rise to this symptom-complex. When the initial dose is sufficiently large, however, namely more than 400 X units, this irritative property is neutralized and simultaneously the inhibitory dosage administered and hence the organism receives no stimulus to develop resistance.

Krinski's observations deserve further study, and I shall refer to them again later. I am not in a position to disprove the statements made by Krinski, yet I am convinced that extraneous factors play a more important part than has been generally conceded. We are fully aware, and some of us painfully so, that among other contributory factors the present cost of supporting the European struggle has raised the standard of what we like to call respectability of our existence and has forced upon us retrenchments in every direction, and, as a result the space in hospitals, apartments and homes has been placed at a premium. Most roentgen ray establishments are confined within exceedingly small cubic feet dimensions. These rooms are not only small but usually poorly ventilated, and if by some providential accident ventilation is achieved it is often impossible to utilize it, for reasons too numerous to mention. When high tension currents with a voltage of 80–150,000, such as are employed in this work, are used, gases are generated and the process of ionization is usually associated with a peculiar odor. This odor is sufficient to cause some patients to experience nausea ; others again note no untoward effects. After the patient has been undergoing treatment for perhaps half an hour he may note the fact that he has developed a headache. These two factors, headache and slight nausea, troubled me a good deal before I paid any special attention to ventilation. I noted that when I remained in the roentgen ray chamber during treatments I would almost invariably develop a faint nausea and headache. This led me to install several fans which kept the air currents constantly circulating in such a manner that fresh air was freely supplied to the patient as well as myself. Since that has been effected I have experienced very little inconvenience and have had very few complaints from the patients.

Dr. Pfahler, of Philadelphia, appears to share this view, for he has devised a mixing chamber where air brought to the chamber from outdoors is mixed with oxygen and from here carried to the patient by means of a tube or nozzle such as is used in giving nitrous oxide anesthesia. During the summer months and so long as the windows can be kept open, simple fans suffice, but I am inclined to believe that the apparatus suggested by Dr. Pfahler will prove highly acceptable during the winter months. The observance of the principle of ventilation and the provision of an abundance of fresh air will therefore remove, certainly to a large degree, some of the elements involved in the production of this undesirable by-product of intensive roentgen therapy.

Dr. Sidney Lange, of Cincinnati, attributes these symptoms to a local or general acidosis. He says (*J. Am. Med. Ass.*): "The effect of the Roentgen ray on living cells is to break down or at least to increase the catabolic changes in the cells. The products

of the metabolic activity in living cells or of the disintegration of protein material are largely acid in reaction. It seemed probable, therefore, that the unpleasant constitutional symptoms following deep roentgen-ray therapy were the result of an acidosis either local or general. It is known that the reaction produced in the skin by the roentgen ray is a local acidosis from cellular disintegration, and that it can best be avoided or abated by the local application of the alkalies (as, for instance, Dodd's lotion).*

"A few clinical tests seemed to prove the correctness of this theory. The administration of sodium bicarbonate by mouth served to ameliorate or prevent the constitutional symptoms in a great many patients. The first patient on whom this medication was carried out was very anemic and weak from uterine hemorrhage due to the presence of a fibroid. Her general condition was such that the possible constitutional after-effects of the treatment were greatly feared. She was given sodium bicarbonate in 30-grain doses every three hours for twenty-four hours previous to the treatment, and this medication was continued for forty-eight hours after the treatment. None of the unpleasant symptoms developed in this case."

After having heard Dr. Lange's report I adopted his suggestion, and from the results obtained I feel justified in prescribing sodium bicarbonate in every case where prolonged roentgenization is required.

Referring again to Krinski's theory in regard to the automatic administration of an inhibitive dose by exceeding 400 X units, we find that American roentgen therapists prefer to employ a lesser number of portals of entry but larger areas of radiation than formerly with equally good results. For instance, in cases of cross-fire treatments where some European roentgen therapists use from 30 to 60 different areas at one seance and give from 600 to 1,200 X units, American operators are inclined to resort to 4 to 24 areas administering 100 to 480 X units and thereby obtain apparently just as good results. It is rare, therefore, to exceed 400 X units at one series of applications, and thus Krinski's suggestion does not help us any. Nor is it at all likely that the deep tissues receive very much less roentgen rays with our method, at least so far as we can judge, because the number of square inches of tissue subjected to roentgenization in 8 to 16 areas by our method, seems to me very nearly equivalent to the number of square inches in 30 to 60 smaller areas employed by certain authorities in extreme cases. We should also bear in mind that the broad focus Coolidge tube has been very little employed outside of the United States.

Before leaving this phase of the subject it is not amiss to direct attention to the fact that this constitutional disturbance is not

* Dodd's lotion consists of: zinc oxid, one-half ounce; glycerine, 1 dram; phenol, one-half dram; lime water, 8 ounces.

the rule, but the exception, and applies to comparatively few cases which undergo roentgenization. This discomfort, however, is infinitesimal when compared, for example, with the suffering subsequent to a hysterectomy, or the removal of fibroids, or any other major surgical operation, to which one should not forget to add the long period of convalescence aside from the operative risk, and the ever present dangers of general anesthesia.

I am not advocating roentgenization as a substitute for surgical procedure where the latter is clearly indicated. I am merely attempting to stir your dormant souls to the appreciation of the fact that certain cases which are now being operated upon routinely would do better by far were they treated by roentgen rays alone. It is about time for the medical profession of Washington to realize that roentgen therapy has a broad field of application in many instances of inoperable cases, aside from other cases where a conjunction of roentgen therapy and surgical measures results successfully where either one or the other alone prove ineffective. I cannot escape the conclusion that the broadened application of roentgen rays will ultimately result in less radical surgical procedure in numerous instances. I believe now that in early cases of mammary carcinoma, for instance, a preoperative roentgenization, followed in a few days by complete removal of the tumor mass or breast only, followed again by extensive roentgenization will prevent recurrence, without resorting to the extensive mutilating operation practiced today.

The remote effects following deep roentgenization are practically *nil*, excepting the cases involving the treatment of the genital apparatus of females. The symptoms such as hot flashes, sweats, vertigo, palpitation of the heart and the like, are in a measure similar to those noted in women nearing the normal menopause, but in these cases they are an index to the roentgen therapist of the effectiveness of his treatment. Much ado has been made of the fact that this symptom-complex is practically identical with that appearing after surgical removal of the ovaries and uterus. We admit that these symptoms closely simulate the condition so often observed after surgical castration, but when they do occur in roentgenized cases they are far less pronounced in severity and soon disappear. That this symptom-complex following roentgenization of the female genital organs appears only in a small percentage of cases and then only to a mild degree, is no doubt due to the fact that the uterus and ovarian tissues are retained by the patient, and thus a continuance of the internal secretion of these organs is permitted, even though it may be greatly diminished in amount. Gauss and Lembcke, in Krönig's clinic at Freiburg, state emphatically that observations made by them after roentgenization showed no signs of pathological adiposity or trophic disturbances in the genital apparatus, excepting, of course, the changes in the uterus. On the other hand, the

vasomoter disturbances, flushes, sweats and cardiac palpitation were present, but only in a comparatively few cases, were slight in degree, and disappeared entirely after a relatively short period.

Perhaps another factor worthy of mention in this connection is the effect of roentgenization on the sexual sphere. There are very few statistics available which deal with this phase. Menge reports a production *in libido* in three patients. Siegel was fortunate enough to collect data in 24 cases in which five admitted impairment of *libido* and *voluptas*, and three complained of moderate restriction of cohabitation, while all the others or two-thirds of the total expressed themselves entirely satisfied with their natural condition. I have never met with any voluntary complaints of this nature, but I will admit that I have not pursued any deep researches in this direction, for the all sufficient reason that any possible deterrent sexual effect that might result from roentgenization would be of such insignificance as compared to the benefits obtained by the treatment that we are no doubt justified in relinquishing any investigations along this line.

In males it is rarely necessary to subject the genitalia to roentgenization. In rectal sarcoma or tuberculous conditions of the bladder or pelvis or in prostatic disease one may readily protect the testes when deep roentgen therapy is employed. The effect of the roentgenization on the reproductive faculty of the male is well known and every protection possible should be exercised in such cases.

We may conclude, therefore, from the study of these premises that the arguments against deep roentgenization and its supposedly untoward effects "thunder in the index but sing exceedingly small in the text." The success obtained in hundreds of cases treated by roentgenization so greatly outdistances the deterrent incidents that we may well dismiss them from serious consideration.

A mere enumeration of the beneficent effects of roentgenization would be such a long discourse that I refrain therefrom lest I should weary you. I have already mentioned the exhilarating effect noted by some patients during and subsequent to roentgenization. Again, take for instance a case of metrorrhagia, with or without fibroids, with the multiplicities of ailments that make the patient an invalid and life a burden. The results obtained by deep roentgen therapy justify us in citing at least one case of this kind here by way of illustration, as this is not the exception but the rule.

Case 1.—White, female, married, aged 48 years, 2 para, had experienced menstrual irregularities since her fortieth birthday. I was called to see her about one year before deep roentgen therapy was applied. She gave a history of profuse metrorrhagia each month lasting from 10 to 18 days. She gradually grew worse and was practically *in extremis* towards the last. She pre-

sented the typical picture of pernicious anemia and was unable to stand or walk on account of weakness and vertigo. Cardiac examination revealed hemic murmur. Rest in bed, good nursing and the usual medicinal measures had very little effect upon the menstrual exacerbation. I suggested surgical measures, but these were refused. I then advised immediate roentgenization. On July 19, 1913, as soon after a profuse exsanguination as possible, she was brought to my office and deep roentgen treatments given. The treatment was divided into three seances on alternate days until 12 doses (180 X) had been administered. An interval of 24 days transpired before the return of the menstrual function. It was scanty and lasted for only four days. The discharge was less than at any time since the beginning of the metrorrhagia eight years ago and proved to be her last menstruation. Three weeks later a second series was given. Patient was improving rapidly ; her mental and physical condition was much improved. Two more series of treatments were given at intervals of a month. This was over three years ago, and today the patient is still healthy and well and has had no sign of recurrence. Amenorrhea was obtained in four series of treatments.

When we contrast the rosy cheeks, the sparkling eyes and the general vivacity of rejuvenated spirits with the emaciated, pallid and decrepid invalid we feel amply repaid for our efforts. Patients who were formerly unable to walk without vertigo or attacks of palpitation on account of the effects of menopausic metrorrhagia or fibroids, have joined the "Wanderlusters" and are indeed a credit to the skill of the roentgen therapist. It is well to remember that all this was accomplished without any surgical procedure or medicinal adjuncts, strange as it may seem to some of you. In some of the cases all known measures except surgical removal of the uterus had been tried without avail, and this would have been incurred in some of these had the conditions of the patients permitted such a radical procedure. Even if the surgeons had considered such a case a safe operative risk, the outcome would have been in doubt and the convalescent period a long one. As it was, some of these patients treated by roentgenization were soon diligently engaged in the pursuit of a livelihood while still under treatment.

Malignant Conditions.—What is roentgenization accomplishing in inoperable malignant conditions? In inoperable carcinoma of the stomach with constant suffering, the roentgen ray usually offers relief from pain in varying degree, to say the least. A case diagnosticated clinically as inoperable cancer of the pylorus by Dr. Mallory and confirmed by roentgen examination with bismuth meal study, was given two applications of deep roentgen rays at one treatment and instructed to return in four weeks. Within a few days after the treatment all the pain subsided and it was with the greatest difficulty that we convinced the patient for the time

being at least that he was not cured. He submitted to a second roentgenization rather reluctantly and then quietly withdrew from further observation. We fear, however, that it will be only a matter of time when symptoms will recur, although he has now been free from pain for six months. The fact remains, nevertheless, that all medicinal measures failed in this case while deep roentgen therapy dispossessed the symptoms completely.

In inoperable uterine carcinoma the results of roentgenization have been so encouraging in the arrest of the development of the disease and the amelioration of the symptoms that I cannot too strongly recommend this measure. Authentic reports of cures by roentgenization are found in the literature, but at present only comparatively few cases have been of five years' duration. Nevertheless, the progressive surgeons are referring more and more cases of inoperable malignant disease—they won't let us have any others—for deep roentgen therapy with the result that many of these cases become operable, while others obtain relief from symptoms and partial arrest of the malignancy, which prolongs their existence by months and years. This statement applies both to primary lesions and postoperative secondary recurrences. Permit me to present two case histories by way of emphasis.

Case 2.—Mrs. R., white, 35 years old, 4 para. History of repeated uterine hemorrhages of less than two months' duration. Patient of Dr. Wm. J. French. Consultation with Dr. L. H. Reichelderfer followed by thorough examination under anesthesia. Patient exsanguinated at the time. An advanced uterine tumor mass complicating the adnexa was found. Diagnosis of inoperable carcinoma uteri was made and the uterus freed as much as possible of degenerative tissue and packed with gauze to check hemorrhage. A specimen of the cervix was removed for microscopical examination, and Dr. Kinyoun reported this tissue to be nest-celled carcinoma. Patient was referred to the Roentgen Ray Department at Sibley Hospital for roentgenization June 28, 1915, and was given 13 doses of roentgen rays on two successive days. The technique employed was as follows: 13 areas of 36 milliampère minutes each; spark gap 10 inches, focus skin distance 6 inches, 4 millimeters of aluminum and one piece of leather as filter, 6 milliampères through the tube for six minutes, a total of about 390 X Kienboeck units. Judicious packing controlled hemorrhage and improvement followed. In two weeks the patient was permitted to return to her home. She had been instructed to return for second roentgenization July 28, 1915, but failed to do so. About this time I was forced to leave the city in search of health, and when I returned in October Dr. French informed me to my great satisfaction that the patient was up and around, doing her house work, and was steadily gaining in weight, her weight at that time being 132 pounds. A thorough physical examination revealed no evidence of carcinomatous involvement. The loss of

the cervix uteri was the only sign of the recent cancer. The patient was well, free from vaginal discharge or odor, and apparently cured. This was in February, 1916. During the same month the patient appeared in my office looking well, feeling splendid, and tipped the scales at 142 pounds. Roentgen treatment of 230 X Kienboeck units was administered the following day. On March 10, 160 X units were administered, and patient advised to remain under her physician's observation and report immediately should any untoward symptoms occur. Up to Sept. 20, 1916, her condition remains unchanged ; weight 145 pounds.

This case represents an inoperable uterine cancer, apparently well sixteen months after the first roentgenization, with complete symptomatic cure by Roentgen therapy. Those who have the temerity to question my veracity are respectfully referred to Drs. French, Reichelderfer and Kinyoun for corroboration.

Case 3.—Mrs. W., age 43 years, patient of Dr. E. W. Burch. Radical operation for adeno-carcinoma of left breast by Dr. Lewis Harvey Taylor, April, 1914. Metastatic carcinosis of 2d, 3d, 4th, 5th and 6th left ribs within a year. Enlargement over the left temporal bone observed in May, 1915. Following this the patient grew rapidly worse and suffered intensely from pain and protrusion of the left side of the head. Narcotics failed to give relief and Dr. Burch finally obtained the consent of the family for a roentgen consultation. The delicate finesse and diplomatic strategy employed by the family physician to bring about this consultation scintillated when I noted the hostile attitude of the family towards anything pertaining even remotely to roentgenization. After a mutual exchange of much language, characterized largely by disinterested persistency and Hibernian irreverence balanced superbly by Dr. Burch's masterful stand of strict neutrality, an agreement was reached and one series of roentgenization arranged. All subsequent roentgen treatments were held *sub judice* pending the results of the first series. On July 29–31, 1915, nine doses of roentgen rays (225 X) were administered to the left side of head, chest and sacro-iliac region. The suffering due to the carcinosis of the left temporal bone was almost unbearable at the time, while the pain in the body was never absent entirely but much less distressing. The growth in the skull had caused considerable enlargement of the entire left half of the head and upper part of the face, the eye was protruded and the facial expression horribly distorted. Patient was greatly emaciated and not expected to survive more than a month perhaps. Within ten days after roentgenization improvement was noted. On August 17–18, 1915, a second series of roentgen treatments was administered (250 X). The pain in the sacral region had ceased and the costal nodules were rapidly diminishing while the pain in the head was noted only at intervals of days and then only slightly. A third series of 225 X was given Sept. 6–7, 1915,

over the head and chest; treatment of the back was discontinued. Patient stated that she had had no pain of any kind since last treatment. She expressed herself rather belligerently in regard to the loss of her hair over the left temporal area. I assured her with equal courtesy that under the circumstances one should not be unreasonable if all the hair over the entire scalp was lost; one can always buy a wig, but heads are not so easily obtained.

On October 5, 1915, a fourth series of nine roentgen doses (225 X) was given. The protrusion of the head had almost entirely disappeared by this time, the facial aspect was nearly normal again. Patient had continued free from pain in ribs, back and head; nodules in ribs and several small tumor masses in the skin had entirely disappeared. On Dec. 16, 1915, patient had continued to improve, had gained 10 pounds in weight and had had no pain during the interval. She considered herself well and wanted to know why treatments should not be stopped. One application of 30 X units was administed to the left side of the head. Roentgen-stereograms showed a small, dense shadow in the temporal bone about the size of a coffee bean as compared with the earlier plates, where the shadow was considerably larger and less dense in structure.

On Feb. 5, 1916, the condition of patient was splendid and further gain in weight was reported. She complained of occasional slight shooting pains radiating from left ear to orbit. She was given one roentgen treatment over the entire side of the head. The patient then withdrew from further observation and treatment, but Dr. Burch saw her recently and found recurrences in the sacral region, but no signs of recurrence in the head or chest.

This case of secondary carcinosis with foci in the left temporal bone and in five left ribs clearly demonstrable, and vague non-demonstrable involvement in the lower part of the spine, received 985 X units, and offered every prospect of a complete cure, and it is deplorable that roentgen therapy was not continued.

A glance through the medical literature of today reveals many similar cases of malignancy which have been favorably influenced by roentgenization. A fair percentage of these cases had been declared inoperable by competent surgeons and gynecologists. By way of parenthesis I might state that my experience at least has not revealed a single surgical specialist who would permit anything short of threatened personal violence to his person deter him from his path of operative sublimity, if he entertained the thought, even transiently, that his patient would survive his operative ministrations. Therefore, when we speak of inoperable cases we mean cases where even surgery is considered helpless. If only occasionally such a case should be cured by roentgenization, doesn't that seem worth while? The percentage of cures in operable cases is not so small as one might think, and many other similar cases are so much improved by roentgenization that

an operation becomes possible, and subsequent roentgenization is followed by ultimate cure.

Now and then we encounter cases which do not respond to the most intensive roentgenization ; some of these cases are improved by radium. Again, a large number of cases roentgenized are not cured ; they are, however, greatly improved, pain is relieved and the last days made comfortable.

The ultimate triumph over malignant tumors in the human economy is still a vision of the future, but another step forward has been firmly taken by the earnest, conscientious and intelligent workers with roentgen rays and a closer association through more intimate consultation among surgeons and internists with roentgen therapists will soon place another rung in the ladder of unselfish achievements that tends to elevate the plane of human existence.

Dr. E. W. Burch was especially interested in Dr. Pfender's report of the case referred for treatment by himself ; the roentgen treatment was followed by a most remarkable improvement. He estimated that the patient's life had been prolonged at least eighteen months, and the pain had been entirely relieved. The patient is not now in quite as good condition as Dr. Pfender's description would indicate, but, as Dr. Pfender himself remarked, Dr. Burch had not seen her for some time.

Dr. W. A. Jack said that one class of cases amenable to x-ray treatment had not been mentioned ; he referred to the old neglected tuberculous glands of the neck. The rays seem to stimulate the development of fibrous tissue in these old, suppurating glands and they heal. Keloids can also be cured by x-ray treatment.

Dr. W. H. Atkinson said that others had spoken of the roentgen treatment of cancers and infected glands. He wished to speak of the favorable effect of x-ray therapy on uterine fibroids. He cited the case of a woman of thirty who had been thus treated with entire relief of an intractable metrorrhagia and the reduction of a large fibroid to imperceptible dimensions. He asked for information about the effect of x-ray treatment of tuberculous spondylitis.

Dr. T. A. Groover said that the time to treat tuberculous glands is before they break down. It is a dangerous thing to call any case of cancer hopeless ; while most cases follow the expected course progressively downward, some few cases get well spontaneously, and there are enough brilliant results achieved by x-ray therapy to keep enthusiasm alive. Dr. Pfender was to be commended for bringing this matter again to the attention of the profession.

Dr. R. A. Hooe asked if there had been any local experience with the treatment of cancer of the prostate with x-rays. He was inclined to doubt the applicability of roentgenism in this condi-

tion for various reasons, particularly the inaccessibility of the gland.

Dr. Pfender said that the discussion had ranged over such a wide field he could not touch on all the topics mentioned. He had not had occasion to treat carcinosis of the prostate by roentgenization; but in the hands of others its use for this purpose has not hitherto been encouraging; the technic has, however, been much improved and future results ought to be better. He had not spoken of roentgen treatment of tuberculous glands because that is a matter foreign to the subject of the paper; he had elsewhere spoken of this field for roentgen therapy. He doubted if x-ray treatment would be of material help in tuberculous spondylitis; but it may relieve pain and may reduce the activity of infection. The power of the x-ray over pure tubercle infection is in doubt. X-ray treatment of this condition could do no harm.

PSYCHOANALYSIS IN ITS RELATION TO PSYCHIATRY.*

By D. Percy Hickling, M. D.,

Washington, D. C.

The word Insanity should be no longer used as a medical term; its legal concept signifies legal irresponsibility due to mental disease and the sociological idea of forcible segregation from the community, being entirely foreign to the medical use of the word, which simply means a group of mental diseases, differing greatly from each other in cause, symptoms and treatment, without regard to either segregation or responsibility, so that the word Insanity, unless explained by the user, is confusing and often misleading. The word Psychosis should be used in all cases when medical insanity is meant. I will therefore use the word Psychosis throughout this paper.

The psychological conception of the psychosis should not be considered as covering the whole field of Psychiatry, many of the different forms of mental disease such as the arterio-sclerotic, the senile, the amentias, including idiocy, imbecility and the moron, the traumatic and the syphilitic groups, have definite pathological changes in the central nervous system, and there can be no question that the endogenous and exogenous toxines are responsible as causative factors for many of our mental cases, and in these groups should be included some of the epileptic and precox cases; but the depressions and excitements, the paranoids, many of the precoxes and possibly some of the epilepsies occur without any

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*Read before the Medical Society October 18, 1916.

structural change or toxic action. It is this class of cases as well as the neuroses and psychoneuroses that are undoubtedly due to faulty mental mechanisms, and while a discussion of all these conditions and their psychogenic mechanisms would exceed the limits of this paper, I will therefore speak only of those cases which may be classed as the psychogenic psychoses and the faulty mental mechanisms which act as etiological factors.

The psychological conception of mental diseases is due to the work of Prof. Sigmond Freud, of Vienna, who published his first paper in 1895, in which his associate, Jos. Breuer, collaborated; since that time Prof. Freud has written a number of papers, the elaboration of which has been the origin of a psychology, which was not only new and original but revolutionary. And since his visit to this country and the translation of his selected papers on Hysteria and other Psychoneuroses in 1909 by Drs. Brill, Wm. A. White, Ernest Jones and Frederick Peterson, his psychology has been in every-day use contributing largely to the understanding and treatment of the neuroses and psychoneuroses. An elaboration of his theories has made them applicable to many forms of the psychoses, so that recently Dr. W. H. B. Stoddart has published his series of lectures entitled the New Psychiatry, and the literature has grown to immense proportions; but as may be imagined his psychology has been subjected to rabid criticism and even ridicule by a number of eminent men. To these critics I would say that the Freudian Psychology is so far ahead of them that their criticisms have not been able to affect it in one particle, and that while it has been slightly modified in some of its details in recent years, yet its fundamental principles remain the same. A number of mental mechanisms are described by Freud, many of which exist in normal mentality, but when elaborated by the individual, produce symptoms of mental diseases which we now classify under the headings of The Neuroses, The Psychoneuroses and The Psychogenic Psychoses.

One of the most important is that known as Disassociation, or the splitting of consciousness. This may be recognized in the normal mentality in two forms: the first is that mental condition which allows us to do effectively two or more things at once, such as carrying on a conversation while we are playing a musical instrument, and by the telegrapher who sends two different messages at the same time. The second is appreciated when we are thinking of one thing and suddenly stop our stream of thought and think of another thing, and then suddenly go back and think of the subject that first occupied our field of consciousness; in other words, it is a break or gap in our continuity of thought. These every-day disassociations are temporary and partial and under the control of our will; when we lose control, or the disassociation becomes permanent, whether partial or complete, then it becomes pathological, and produces symptoms which are recognized by the

patient or his friends, or both. This is the condition explaining automatic writing, somnambulism and double personalities; at times these two streams of thought exist without one having knowledge of the other, and, as it were, lead an independent existence; they are said to be split off from the rest of consciousness and may appear as foreign bodies to the individual; in this way they form hallucinations. The voice which the patient hears is the method by which the disassociated system makes itself known to personality; persons hearing and answering voices are not unusually observed in mental cases.

Delusions are explained by the disassociation of one stream of thought from the ego; this is seen where a person believes himself to be a king or worth millions of dollars, while the other strain of thought which is more in touch with the environment enables our patient to scrub the floor or beg for a cigar; each of these streams of thought exist independently and without knowledge of the other, and cannot be adjusted by the patient himself or by any argument which you may use; if this adjustment could be brought about it is obvious that the delusion could be removed.

Rationalization plays an important part in the abnormal; the deluded one neglects as far as possible the facts which are inconsistent with his delusion. The process of rationalization is often seen in health where belief comes first and then by rationalization ideas are brought into the field of consciousness to support the belief, and as Stoddard so well points out, the stronger the belief and the more we think that it is superfluous, foolish, unpatriotic, wicked or bad form to think otherwise, then our belief must be irrational. It is only when our opinion or belief is based on experience that we find it to be rational. The pathological use of rationalization is the mechanism which leads to the formation of secondary delusion; it is a bridge to connect the delusion or hallucinations with the actual facts of the patient's experience.

We will next consider the Freudian complex, which may be defined as a constellation of ideas of a high emotional value with a tendency to produce a definite line of action; mentally it is equal to force in physics; it is not always in action except under stimulus, and it may be conscious, fore-conscious or unconscious, or a part may be conscious and a part unconscious.

The complex is the causative factor of rationalization; it is not reason, as many suppose, but rationalization based on the complex, which plays the dominant part in our thoughts and conduct; and the complex, when understood, explains all the patient's peculiar thoughts and actions. The complex exists in the normal mind as a hobby and in the psychosis may be manifested as a depression or melancholia, as it is sometimes called, an excitement or irritability or act of passion, the cause of the condition being unconscious and often believed by the patient to be due to other

causes than the true one. Delusions would not seem so strange if we go deeper in the mind and find the complex. This can be done by psychoanalysis, and when the complex is found or, as we term it, brought from the unconscious into the conscious field of mentality and properly adjusted by abreaction the symptoms will disappear.

From the condition which we described as disassociation, or the formation of two trains of thought, the mechanism of conflict often occurs, as the two streams of thought are often antagonistic or repugnant to each other. This conflict often begins in early life between the instincts ; the instinct of nutrition, self preservation and reproduction, which Freud includes under his *libido*, comes into active and early conflict with the herd instinct. It is also found that there is a conflict between the complex and the personality ; when the mentality is in conflict the house is divided against itself, and in a condition of unpleasant emotional tension which is exhibited in its simplest form by a condition which we term nervousness. Indecision and paralysis of action are frequently found. Conflict, with its unpleasant tension, cannot exist indefinitely, but if properly adjusted, results in a cure of the distressing symptoms, and where the conflict is the primary departure from the normal, disassociations and their consequences are avoided. The morbid attempt at adjustments of conflict made by the patient in his desire to obtain relief, often results in repressions, the mechanism of repression being probably one of the most dangerous of our mental processes, as it always leads to morbid symptoms which are so often found in our psychogenic cases. Repressions are preformed by the patient when he refuses to think of the disagreeable idea, when he tries to put something out of his mind, when he abuses himself for having an unwelcome thought, etc.; for when the idea or complex is forgotten, forced into the unconscious field of mentality, mental troubles of the most distressing kind occur, and repressions of the effect or feeling are as bad or even worse than the repression of the thing itself.

Repression of the complex is accomplished, according to Freud, by means of a censor, and the stimuli normally flowing directly into consciousness are blocked by the censor, so that while the stream continues to flow the stimuli are indirect and distorted and are not recognized by the patient, and the unexplained fascination or interest are caused by the indirect expression of the complex, and are often most distressing and mysterious to the patient ; the complex itself also produces a number of symptoms such as prudery, shyness, abnormal gaiety, and many others of a defense character, which prevent the direct expression of the repressed complex. The pathological hope of tuberculosis cases and the happy exterior which is so often used to conceal the secret sorrow, are symptoms which originate from the presence of the censor, while the various manias, so-called kleptomania, dipsomania, the

washing manias, etc., are the pathological symptoms due to the indirect action of the complex which has been repressed ; in the same way, mutism, mannerisms, stereotyped actions and the peculiar symptoms shown by many of the precox group are produced.

The mechanism known as projection, which has been defined as a peculiar reaction of the mind to the presence of the repressed complex or its effect, which seems no longer to belong to the individual, but to some other person, either real or imaginary ; this is usually seen in every-day life where the patient cannot tolerate some trait of character in another person, or where intense prejudice exists. You should always keep in mind the mechanism of projection, for the very fault or difficulty which they cannot tolerate in others exists in themselves. The fault constitutes a complex repugnant to the personality as a whole ; it has been self repressed, and the conflict is avoided by projecting it on some other person ; the result being our own peace of mind, but a psychosis is the result ; what is true of ourselves becomes a delusion when applied to others. This is commonly seen in alcoholics, in their delusions of infidelity, and the mechanism of paraphresia or paranoia, and the paranoid condition is thus explained ; the patient has secret desires, repugnant to the personality, incompatible with his standard of thought ; he refuses to treat them as a part of himself and, through projection, attributes them to others ; projects it on some one else, who becomes his enemy, trying to cause his downfall. The arguments in the several varieties of paranoia are explained as follows : The repressed complex being a homosexual one, as the mental formula always starts with "I love the man," in males this is intolerable to the field of consciousness, and is changed to the thought "I do not love him, I hate him." And this becomes by projection "he hates me, therefore he persecutes me," this being the mental process of the persecuted paranoiac. The exalted, the religious, the amorous and the jealous paranoias being the same mental mechanism only slightly changed.

In order to avoid the conflict of homosexuality he has cured himself at the expense of reason. If at an early stage these conflicts had been abreacted the conflicts would have been stopped without paying the horrible price.

The last mental mechanism which we will consider this evening is that known as Fantasy ; this is a mode of expression by which we content ourselves with the building of pleasant mental pictures, in which the complex obtains an imaginary fulfilment by fantasy ; satisfaction is often obtained although only partial or limited. In the normal person it is known as day dreaming, by the voluntary formation of pleasant mental pictures the wish fulfilment is obtained and the complex gains incomplete expression. This is a bad mental mechanism, as the rule of health is that all thoughts

should lead to adequate expression; in fantasy the thoughts are all with the wish, and the real things are neglected, and when indulged in to a moderate degree, the patient is said to be absent minded; but the bridge is soon crossed; as reality is avoided the patient soon lives in a self-made world, his dreams come true and the precox syndrome is apparent.

Where the real things in life become so disagreeable and intolerable to the individual there is a disassociation of the field of consciousness; the reality which is so painful is repressed into the unconscious, while the wish is developed to its highest degree in fantasy, and thus the patient is entirely contented and even happy; yet the psychosis is the result. And these cases would not exchange their unsoundness of mind for sanity if they could. Many of these cases, owing to an impossible adjustment to their real condition in life, are hopeless, yet many cases, and especially in the early stages, can be adjusted to their environment, as it is not so much the thing itself but our attitude towards it which makes pleasure or painful reactions in our content of thought; for after all the pleasure and pain complexes are the real things in life, and their adjustment to our own best interests is the function of our mind, and when this is done properly and successfully a normal mentality results, free from pathological symptoms; when this is not done or done in a faulty manner, symptoms arise which are classified either as Neurosis, Psychoneurosis or Psychosis.

Literature consulted.—See.
Selected papers on Hysteria, No. 4 of Monograph series.
Outlines of Psychiatry, by Wm. A. White.
No. 1 of the Monograph series,
The Psychology of Insanity, Bernard Hart.
The New Psychiatry, W. H. B. Stoddart.

Dr. Tom A. Williams said that he should have to run the risk of having the suspicion of suffering from a psychosis cast upon him by exhibiting the symptom of projection when he strenuously objects to the statement that "psychoses are undoubtedly due to pathological psychological mechanisms"; but he felt let out of this suspicion by the fact that psychiatrists elsewhere generally reject this idea. Most of the paper was, of course, quite true; it was a rudimentary exposition of psychology as commonly accepted, but it did not take Freud to teach this psychology originally; it is all implicit in the writing of Wm. James, Professor Sidis, and others. It is not sufficient to say that all psychoses are due to a complex, and may be cured by uncovering this complex. Many psychoses begin in a very definite physical want or deficiency which the victim erroneously explains by ill-directed philosophizing.

Dr. Roy said that Dr. Hickling had said that certain mental

processes go on by which a complex influences the behavior of an individual, or by which these complexes are subdued by a censor, and Dr. Williams said that the statements were substantially correct. Dr. Roy wished to know how Dr. Hickling knows these processes do go on.

Dr. G. M. Kober said that when one observes the movements in the incidence of diseases, and notes the increase of little understood diseases and the decrease of well understood diseases, one should feel indebted to those who bring to the attention of the profession those diseases in which the present status of diagnosis and treatment is not satisfactory. There is much too little taught in the schools, and there is too little interest on the part of the average practitioner, concerning these increasingly prevalent psychological troubles.

Dr. Hickling said that he would not accept Dr. Williams' challenge and open a debate of the value of psychotherapy; it would be too much like old discussion in this Society about the proper treatment of appendicitis. He was astonished to hear, however, that no one outside of Washington takes any stock in psychotherapy; he would not care to style White, and Jelliffe, and Putnam, and others of equal standing as nobodies. As to the question between psychogenic and organic causes of insanity, it must be said that, of course, there are some cases in which organic changes can be demonstrated, but in the pure psychoses no such changes can be found. In reply to Dr. Roy, of course, no one had ever seen a complex, nor a censor, nor a stream of thought; but no one has ever seen an atom nor an ion. The latter are necessary to the foundation of chemistry, however, and so the terms used by Dr. Hickling were necessary and convenient ideas for the understanding of psychology. A "hobby" is an illustration of a complex; it tinges everything the possessor of it talks or thinks about. A doctor thinks of everything from the standpoint of a doctor, and has points of view inexplicable to a lawyer, just as the lawyer has points of view inexplicable to the doctor; the one has a medical complex and the other a legal complex. When a complex, by alteration or repression, so alters the behavior of the possessor of it that his behavior becomes abnormal, then the individual is said to have a psychosis.

"I heard today that your son was an undertaker. I thought you told me he was a physician."

"Not at all."

"I don't like to contradict, but I'm positive you did say so."

"You misunderstood me, I'm sure. I said he followed the medical profession."—*Tit-Bits.*

DILATION OF THE LEFT SIDE OF THE RIGHT VENTRICLE WITHOUT DILATION OF THE WHOLE VENTRICLE; CAUSES AND SYMPTOMS. ABSTRACT.*

By Philip S. Roy, M. D.,

Washington, D. C.

Causes.—The right ventricle occupies most of the anterior aspect of the heart, therefore it is the most accessible portion of the heart for physical examination. It is the thinner of the two ventricles and the more distensible, particularly that portion adjacent to the pulmonary artery called the *conus arteriosus.*

The causes of the dilation are rheumatism, phthisis, typhoid fever, nephritis, overstrain, pneumonia and asthma. Other infections than those I have mentioned, may also cause the condition. It occurs more often in childhood and early adult age, but no age is exempt.

Physical Signs.—On inspection and palpation we find a pulsation at the fourth left interspace. As the ventricle dilates this pulsation rises to the third and second interspaces and extends out as far as the nipple line. I have seen it in one case as far as the anterior axillary line. The pulsation is wavy in character and does not resemble the strong pulsation of aneurism.

Report of three cases of dilation of the left side of the right ventricle, without any physical signs of dilation of the right side of the ventricle and no tricuspid regurgitation.

Case 1.—Child, ten years old ; great shortness of breath, hemoglobin index 55 ; upon examination he was found to have all the physical signs of dilation of the left portion of the right ventricle. With rest, diet, arsenic and iron the case recovered.

Case 2.—A woman of 30, with acute inflammatory rheumatism ; seen in consultation. The dyspnoea was so great that she could not lie down, and rested only after hypodermics of morphia. The pulsation on the left side of the sternum in this case extended out beyond the nipple line and up to the first rib. The patient was made as comfortable as possible with opiates. Digitalis was given, also anti-rheumatic treatment, and although on several occasions it looked as if death was near, she gradually recovered and all heart symptoms disappeared.

Case 3.—Man of 68, with pneumonia of the right lung. He progressed very favorably ; the crisis was followed by rapid improvement for five days, when, against my instructions, he got out of bed and attempted to walk around. I was sent for in great haste. He was suffering intense shortness of breath and presented the picture of a very ill man. Upon physical examination I

* Read before the Medical Society October 11, 1916.

found that the right ventricle had dilated on the left side, and this entirely explained his condition. Fortunately under rest and treatment he made a complete recovery. It is interesting to note that in infections, the heart muscle is often changed in character and made as distensible in old age as it is in youth.

Dr. W. M. Barton asked what was the cause of the dyspnea in these cases? If the condition of dilatation described was unaccompanied by tricuspid regurgitation, and if there was no venous stasis in the lungs, he was at a loss to account for the dyspnea.

Dr. B. M. Randolph had often seen pulsations to the right of the sternum but without marked dyspnea. Dr. Roy had said that there was no fibrous tissue in the heart; surely this must have been said inadvertently. Dr. Randolph asked if there were any statistics bearing on the morbid anatomy of the condition described by Dr. Roy.

Dr. J. W. Chappell said that Dr. Roy had made the statement that he had often seen this condition of dilatation of the right ventricle; Dr. Chappell would suppose the condition to be a rare one, for in a long experience he had never seen the syndrome, Why do these patients have dyspnea when they sit up? What anatomical reason is there for the occurrence of the dilatation at the point described? What other means besides the administration of arsenic and iron had been used in the treatment of the anemic child whose case was described by Dr. Roy?

Dr. Roy said in reply to Dr. Barton that the dyspnea in these cases was due to venous stasis, but it was not necessary to assume that there must be tricuspid regurgitation to account for this. Dr. Roy had not said that pulsation in the right fourth interspace does not occur without dyspnea; but if the pulsation is marked, there is always dyspnea. He replied to Dr. Chappell that all of these patients have to be put at rest; arsenic and iron will not cure the dyspnea without the proper rest.

Dr. S. S. Adams asked how Dr. Roy accounted for the venous pulsations if there was no disturbance of the tricuspid valve?

Dr. Roy said that in the dilated state described the right ventricle was not working properly; it had lost its suction power, and the neck veins did not fill and empty properly.

Anatomical Trespassing. — "Ma! ma!" sobbed Willie, "do my ears belong to my neck or my face?"

"Why, what is the matter?" was the temporizing reply.

"Well, you told Mary to wash my face, and she's washing my ears, too?"—*Sacred Heart Review.*

THE MANAGEMENT OF CONFUSIONAL STATES WITH SPECIAL REFERENCE TO PATHOGENESIS.*

The entire paper, of which this is an abbreviation, appears in *International Clinics*, 1916, Vol. II.

By Tom A. Williams, M. B., C. M., Edin.,

Washington, D. C.

I.—Confusion is a hall-mark of the effects of toxin upon the cerebrum. When very slight, special tests are required to elicit it. Interference with neuronal conductivity is the chief pathogenetic factor. The topical incidence of this is one of the determinants of the form taken by the psychosis, whether hallucinatory, disorientative, depressive, delusional or what not. Another factor is the state of the body secretions as affected by the toxins. A third factor is the patient's psychological status as determined by the capacity and the opportunity for experience.

Toxin may be exogenous, whether from living parasites or not, or endogenous, as from vascular stasis, malnutrition, exhaustion, endocrin disorders, or it may be dynamic, as when psychogenetic.

Bodily signs are usually present, such as reflex disturbances, tremor, circulatory disturbances and vegetative disorders. Headache and insomnia also almost always occur. Of the latter onirical delirium is usually a feature ; it is a kind of somnambulism with partial amnesia, often of mystical character. The perceptions are feeble, and motor reactivities usually dull. That structural changes may occur when the cause of confusion is long maintained is manifest upon histological examination of the brain. But that these often permit of repair seems to be shown by apparently complete recoveries, even after years.

The management of the patient consists of firstly : the avoidance of adding the toxicosis of the imperfectly elaborated protein, which is prone to occur even with a moderate diet, because of cloudy swelling of hepatic cells induced by the causative toxin or by a similarly induced interference with renal elimination, causing retention of nitrogenous substances. Lack of proper adjustment of the diet, especially in the matter of carbohydrates, leads to an acidosis, which further aggravates the toxic state by interfering with proteoclysis as well as with proper catabolism. The remedy for this is of course adequate ingestion of carbohydrate substance. The giving of alkalies, after all, has only a neutralizing effect, although it is necessary in some cases. But the assistance to metabolism of the alkaline salts, especially in the combinations naturally occurring in most fruits and many vegetables, is invaluable ; so that these should be copiously added to the diet. Of

* Read before the Medical Society March 29, 1916.

course, sufficient water should be given, but the *naif* idea that abundance of water will either neutralize or favor excretion of toxins is untenable.

Violence, distress or agitation should never be met by narcotics, which merely increase cerebral toxicity. These symptoms are quickly mitigated by hydrotherapy until the full effect of metabolic improvement from proper diet can show itself upon them.

II.—Some of the cases (from *International Clinics*) illustrate both the symptomatology and management of confusional states of different etiology. The first of these illustrates a post-infectious toxic state in an individual predisposed by sclerotic blood vessels, feeble heart and a lack of constitutional robustness, as well as previous over-indulgence in alcohol. The toxic confusion was maintained and aggravated by the ingestion of pharmaceuticals and an excess of protein. Recovery was accomplished by means of the afore-mentioned principles after several consultants had failed to benefit the patient.

CASE I.—*Post-Influenzal Confusion with Exhaustion.*—In May, 1915, a judge, aged sixty-four, after a severe attack of influenza, remained very weak, confused in mind, and began to develop hallucinations and delusions of a vague character. Several consultants were seen without result, and he became weaker and less clear mentally. The patient was in a typical condition of mental confusion. Deep reflexes were very faint, abdominal reflexes were absent, there was plantar flexion. There was paralysis and no anaesthesia, so far as could be ascertained. The optic disk was not oedematous and showed no arteriosclerosis, but the superficial vessels had thickened coats, though the heart was small, the apex reaching only to the lower border of the fourth rib, one inch inside the nipple line.

Systolic blood pressure was 102, the diastolic 60. The kidney function had been ascertained by Dr. A. B. Hooe to be normal, phthalein appeared in ten minutes, to the amount of 30 per cent. and 34 per cent. in the first and second hour, respectively. But there was a large quantity of indican and a slight trace of albumin.

The patient was taking the following diet and medication: 2 A. M., beef juice; 3:20, ammonia; 4, red solution potassium iodide; 5:30, grape-fruit juice; 6:15, three tablets, egg, whiskey, milk; 7:30, ten drops B. P., adrenalin solution; 8, ten drops solution iodide potassium; 10:20, soft toast, coffee; 11:15, three tablets caffein, strychnin, spartein; 12, ten drops B. P.; 12:30, ten drops solution; 1:30 beef tea; 2:30, ammonia; 3:30, three tablets; 4, custard, cream; 4:30, ten drops B. P.; 4:45, ammonia; 5, ten drops solution; 7, egg, whiskey, milk.

I considered this a case of acute exhaustion psychosis, partly toxic in character. The treatment prescribed was embodied in the following report to his physician:

As the patient is suffering from exhaustion, stimulants are contra-indicated, as the tired organ is incapable of further response to them ; therefore, I think it wise to omit caffein, the secondary effects of which increase the exhaustion.

Strychnin should not be further given either ; for it merely increases the discharge that is the exhaustion of energy of medullary neurones.

Spartein is a nerve-muscle poison, the effect of which in improving cardiac activity cannot be maintained for long without greater nutritional capacity than the patient possesses.

I see no advantage in the iodide of potassium. Furthermore, the basic element of this is a strong cardiac depressant. Nor should I give the bromides during the effort to build up the patient, as they diminish metabolic processes and diminish resistance. Ammonia should be kept for emergencies only, as its effect is evanescent.

The regime I prescribed is as follows : 6 A. M., five grains of sodium bicarbonate in four ounces of hot water ; 6:15, one orange ; 6:30, breakfast, cereal and milk, one egg, crisp bacon ; 8:30, massage, consisting of slow, deep pressure without friction ; the purpose of this is to increase the *vis a tergo* of the circulation and thus aid the heart by saving its *vis a fronte*. Sleep if possible.

On waking, about 9:30, five grains sodium bicarbonate in four ounces of water ; 10 to 10:30, lunch, one banana, cereal and milk ; 12 to 12:30, massage, sleep ; 2 to 2:30, dinner, meat and potatoes, green vegetables ; 4:30, massage, followed by five grains sodium bicarbonate in four ounces water ; 6:30, supper, unpolished rice and milk, one banana. Between that and midnight, massage again when the patient is awake. For midnight lunch, graham crackers and milk are desirable. The quantity of milk at one meal should not exceed five ounces. After meals the patient should be given one capsule of "phytin," an organic phosphorus preparation of the Society of Chemical Industry of Basle.

Beef tea and gelatin should be omitted as containing too much excrementitious materials, which are cardiac poisons. Coffee and tea should be omitted also. A small piece of bread, with or without butter, may be taken with each meal if desired. Water should be the drink, and should be given about one hour before each meal, but should not be restricted to that time if the patient desires it at any other.

The adrenal principle should be continued ; and I think it is better given as the dried gland, say three tablets a day to start with. I think that its effect might be improved by being taken along with one tabloid of "hormotone."

If this diet is found to be too heavy, diminish the quantities at the commencement. If the patient suffers from the heat, cool

sponging should be beneficial; and in any case its effect upon the innervation of the vascular system is usually most beneficial; the water should be used lukewarm. The best cereals to give are puffed grains, with an occasional change to oatmeal and the brown prepared wheats, such as Ralston's. If the patient should desire any one article of food, let him have it occasionally.

When these measures were carried out, improvement was rapid; so that in four weeks the patient was able to be about, and the following term took his place on the bench, and remains well at this time.

CASE II.—Seen twice with Dr. Hardin illustrates the fact that old age, weak heart and debility need not denote unfavorable outcome.

CASE III.—The exogenous poisons, such as alcohol, may produce a confusional condition which resembles paresis. A case of this kind was sent by De Aymer, of Charleston, in 1909, because of hallucinations, delusions and violence, the result of eight days of alcoholism. The distinction was very simply made by examining the spinal fluid, so that the patient was sent home well in two weeks, even although he had shown slurring and reduplicated speech, and great impairment of calculating power. Seven years later the patient remained well.

CASE IV.—The distinction was similarly made in a case due to morphin to which I was called in consequence of an alienist's diagnosis of paresis.

It is true that an occasional case of paresis very rarely has as low a lymphocytosis; but never during an acute attack of the period simulated by this patient.

This patient's morphinism was perhaps due to marital infelicity, for he is now remarried and five years later remains well.

III.—The endogenous sources of confusional states are most clearly seen in hypopituitarism, as the following case shows:

CASE V.—*Narcolepsy from Hypopituitarism.*—Confusional state was that of the girl of twenty-five referred by Dr. John Dunlop in 1911, to whom she had been sent on account of the pains in the back and dragging feeling and tenderness in the legs, in the belief that she had sciatica. There were absent-mindedness, severe amnesia, dull, heavy headache, which was sometimes bursting and was located deep and low in the middle of the head. Torpor would occur often suddenly, even causing her to fall. The mental confusion was most marked in these attacks, in which she felt as if intoxicated, singing and speaking absurdities. Although there was no vertigo, lines would blur when reading.

General and neurological examination was negative, except for increased reflexes, hypertrophy and tenderness of the subcutaneous fat, the weight having increased from 131 to 184 pounds in three months. The limbs were irregularly asymmetrical; for

instance, the left knee was 16 inches, and the right 17⅛; the thighs, respectively, were 38½ and 38¼, and ankles 9¾ and 9 inches in circumference. The femoral veins were engorged, the conjunctiva congested. A neoplasm around the pituitary was diagnosed on account of the situation of the headache, torpor, the adiposis. Confirmation was obtained by the finding of visual field contractions, and deepening of the sella turcica, as shown by the x-ray.

The treatment of the case consisted of the exposing of the pituitary region to radiotherapy, applied from four different temporal points, about ten minutes every week.

Six months later, although the weight had not diminished, the headaches had, the visual field had enlarged, the reflexes diminished and narcolepsy ceased. We expected to give thyroid gland in order to diminish weight, but the patient passed from observation; so we do not know if her relief continues and are unable to supplement the preliminary report of the case made in January, 1912, in the *Journal of the American Medical Association.*

IV.—Psychic disturbances such as a powerful emotion may cause temporary confusion; but it is doubtful if this can be prolonged in the absence of secondary somatic factors, such as impaired metabolism, circulation and internal secretions.

CASE VI.—The case which follows, however, was purely psychic when dealt with by me.

Post-Onirical Ideas Removed by Reeducative Psychotherapy.—A clerk, aged twenty-one, was referred by Dr. J. J. Richardson for advice and treatment on account of a state of mental confusion, impossibility of concentration on work, extreme depression of mind, and nocturnal hallucinations after tonsillectomy.

After he had given his name and address he began by saying: "Do you believe in God and Christ?" and when I asked him what was the matter, he said: It is dreadful, awful. Where am I and what is right? It seems desecration to speak of it; if you can't help me I do not want to speak of it. Everything seems blended into one thought; all else is confusion." I then asked him how the trouble had begun, and after much questioning he succeeded, with difficulty in doing so, revealing to me what had transpired.

During ether narcosis he had felt that the world had reverted to nothingness; that in consequence he could not reach God and Christ, and longed for death, so that he could escape this terrible nothingness. Everything seemed blurred in that one thought, which kept recurring in spite of his prayers to God. "It seemed a curse to be brought into the world to suffer that awful mental pain; it seemed like after-death lasting a million years."

For the next week or so he had gone about suffering terribly, seeming as though he would go insane if he could not return to God. A lecture on evolution seemed a desecration. He would

wake at night, having dreamed the experience again, trembling with fear of his future.

Examination showed no physical disturbances.

Therapeutics.—He was treated by a full, though concise explanation of how thought is disordered by the perversion of brain chemistry during narcosis; how the feeling-tone may also be thus depressed, and how the distortion of impression during a sad feeling-tone phase resulted in his hallucinatory concept of chaotic annihilation. It was explained that this concept was based upon morbid percepts caused by the ether, and therefore should not prevail over rational explanations of common experience and good sense. Many illustrations of toxic and mystic thought were related, and comparison drawn with his own case. He was asked to write out the inferences he drew from the facts presented him, and he was referred to a clergyman for an explanation of his theological doubts. This, however, he did not receive, and I had to resume treatment without this assistance. He was well in a week.

CASE VII.—*Anxiety Causing Exhaustion which Produced Mental Confusion.*—A woman of thirty-five was referred by Dr. Ada Thomas, because the patient became disturbed about some botanical investigation she had conducted successfully which she could not seem to finally formulate, although she had made a preliminary report to the satisfaction of her superiors. She would keep on starting experiments, but they did not seem to go right. She felt dazed and as if everything was out of joint. The work seemed easy, and yet she could not accomplish it. As there was neither insomnia nor loss of weight, she felt that her trouble was psychological. But her reflexes were exaggerated, her hand trembled, her eyeballs were prominent, with congested lids, and the breath was very foul. However, she persisted that it was temperamental, as she had an attack as a teacher some years before, and thinks that she was prone to it as a child. She was hyperconscientious and had too much ambition for her strength.

Though her blood-pressure was only 128, her diet was lacking in succulence, and she had been taking extra milk, but without causing constipation. Thinking that improved metabolism might help her, I prescribed a week's vacation, with golf, a more succulent diet, and a mixture of hormones. In a few days the blood pressure fell to 105, diastolic 55, and she "felt like doing nothing at all, and without mind," so that the golf was stopped, and she was put to bed, whereupon the blood-pressure, after five days, slowly rose to normal, the reflexes diminished, the tissues were firmer, but the pulse rate mounted over 100, going to 120 sometimes, and slight exophthalmos appeared, with the sign of Moebius. There were no sweats, the breath was less foul: she felt clear mentally. Mixed hormones were stopped. She was

then given secretogen and advised to return to work the next week, which she has accomplished satisfactorily since.

V.—*Chronic Confusion.*—That many cases of *chronic* mental alienation supposed to be idiopathic are in reality toxicogenetic is becoming clear. Most significant is the autopsy material of the Massachusetts State Hospital, in which every case of 100, carefully studied, showed kidney lesions.

When confusion becomes chronic, internment is usually imposed, often with a diagnosis of dementia praecox, which is regarded by Régis as merely the chronic form of the mental confusion of Chaslin. From Kraepelin's rubric, Régis excludes cases of constitutional origin, usually the hebephrenics, which undergo rapid involution at puberty. The others, he maintains, begin with an acute attack of mental confusion due to toxin, usually show catatonia, and often end in dementia. Otherwise, there is a gradual failure with delusional formation inversely proportional to the rapidity of the dementia, and finally, a permanent defect.

The recovery of some of these cases, even after long periods, is in harmony with the conception of Régis that a factor outside the cerebrum itself is at work. This is in no way antagonistic to the finding of lesions in the brain itself by Southard, for we know that toxin can produce neuronal damage. A most remarkable recovery of a confusional state of seventeen years' duration was recently reported by a Pennsylvania psychiatrist.

CASE VIII.—I myself have reported one of recurrent maniacal confusion of toxic causation, which was completely removed when we prevented the auto-toxaemia of excessive eating, which at each alternate menstrual period produced an acute confusional attack, with rise of temperature, leucocytosis as high as 30,000, lasting for ten days or so, and never leaving the patient quite normal in the intervals. (*New York Med. Jour.*, 1911; Diet in Nervous Disorders.)

VI.—It is less well known, however, that an acute mental confusion sometimes occurs in consequence of secondary syphilis. In this there is always found an intense congestion of the meninges, and there is consequently an abundance of lymphocytes in the cerebrospinal fluid, which is not always the case in chronic endarteritis; although even here some meningitis is the rule and the fluid shows an increase of cells.

VII.—In this place I do not consider in detail the mild, recurrent chronic confusion which is often an accompaniment of, and sometimes substitute of, recurrent headache. That it is also a toxic phenomenon seems clear from a study of a considerable number of cases where (*A. M. A.*, 1916) successful management is based upon a view of their pathogenesis more precise than those hitherto set down without adequate thought by most authorities, The following is an example:

CASE IX.—*Marked Confusion Due to Metabolic Migraine Re-*

sembling Petit Mal.—A bacteriologist, aged thirty, was referred to the writer in the spring of 1912 by Dr. Paul Johnson, because of attacks he called "billious" (but not preceded or accompanied by constipation), which produced headache, preceded by numbness and pricking in the fingers, followed by dizziness, mental confusion, and foolish talk of paraphasic type, without loss of consciousness. These attacks had occurred every two or three months since the age of twenty-two; they were of very short duration; there were no scotomata, but they were formerly accompanied by vomiting. The headache was of the splitting kind, lasted all day, and was followed by dulness and slowness of thought the following day. The capacity to concentrate his thoughts was increasingly impaired even between the attacks. He was at times irritable. He had no bad habits, and, apart from these attacks, he was well and strong. He received a blow on the left side of the head as a boy, and there was still a dent in the left parietal region, upon which side the headache more often occurred. He had a large appetite, which he said he controlled, but he ate meat thrice a day, although, he said, sparingly. The blood-pressure was not raised, and reflexes and sensibility were normal.

Treatment and Progress.—He was given the low protein "standard" diet. He wrote the writer the following winter: "Since I have reduced the amount of protein in my diet and increased the quantity of vegetables, I have had no recurrence of those spells." Dr. Johnson informed the writer that he remained well to date, over three years later.

VIII.—*Therapeutic Summary.*—The treatment of confusional states should be easily gathered from the foregoing. It should not be a merely empirical dietary and effort at elimination, but should ever be directed towards combating the etiological factor of the confusion. Thus, when the kidney is at fault, nitrogenous food must be diminished; so, also, when the liver is disturbed. When exhaustion has occurred nutrition must be ample. When the internal secretions are disordered, it is to these that attention must be directed. When psychological factors are at work, they must be met with psychotherapy. Physiological irritability must be counteracted not by depressants or narcotics nor by forcible restraint, but by hydrotherapy, fresh air and non-stimulating food. Even in patients violently disturbed the death-rate where narcotics are used is much greater than when hydrotherapy is employed alone.

Gregg says, in recounting their experience at the Boston Psychopathic Hospital:

"The result of the eliminative treatment of the deliria with relative freedom and hydrotherapy, and a minimum amount of medication, far excels in effectiveness the usual treatment by restraint and depressant drugs in cases of the symptomatic psychoses, including alcoholism.

"Every general hospital should be provided with the facilities for treating properly cases of delirium. Such facilities should include isolation wards where quiet is not essential, and continuous bath apparatus for hydrotherapy."

Very striking is the difference in the death rate among 50 cases of delirium tremens in five general hospitals, comprising 10 cases from different hospitals in New York, Philadelphia, Baltimore and Boston. These were treated by depressants and showed a mortality of 26 per cent., while 10 cases from the Boston Psychopathic Hospital were without mortality, in spite of the fact that they were older and more complicated.

In the acute and grave cases measures may be required more drastic than those employed in the cases I have related. Such are: Rectal irrigations, saline injections, intravenously or per rectum; but these with caution, lest chlorine retention on account of renal hypofunction, by causing oedema, aggravate cerebral incompetence; hyperhydrosis by electric-light baths or hot-packs; or even bleeding or rachiocentesis.

Dr. Lowe asked how the adrenalin was given in the second case reported by Dr. Williams.

Dr. Williams said that ten minims of Parke-Davis adrenalin solution were given three or four times a day. He would ordinarily prefer the dry glandular substance.

Dr. Lowe said his question was prompted by Bastedo's experiments which show that adrenalin given by mouth or subcutaneously has no general effect whatever; it acts on the blood pressure and heart only when given intramuscularly or intravenously.

Dr. Williams replied that Bastedo's observations are well known, but they have been superseded by other work. It is now known that the administration of the substance of the gland will be followed by a slow rise of pressure in cases where the pressnre is low; it has no effect in cases with a normal pressure level. Adrenalin is a pressor substance and it does not represent the total effect of the gland functions; both cortex and medulla are required to affect morbid individuals.

BATTLE OF WITS.—"Doctor, isn't your bill rather high?"

"You must remember, sir, that you had a high fever."

"True; but you said that my condition was very low."

"Ah, yes, of course. But, you see, my charges are based not upon the state of the patient, but upon the character of the disease."—*Boston Transcript.*

CLINICAL OBSERVATIONS ON SO-CALLED GRIPPE. AUTHOR'S ABSTRACT.*

By B. M. Randolph, M. D.,

Washington, D. C.

The terms "grippe" and "influenza," during this generation, have been used in this country in a vague and unscientific way to describe seasonal affections, more or less epidemic in character, and characterized by abrupt onset, neuralgic and muscular pain, fever, prostration and inflammation of the respiratory tract. Since 1892 the etiological rôle played by Pfeiffer's bacillus of influenza, while always open to question, has been quite generally accepted by the profession at large.

Opportunity for the investigation of this subject was offered by the occurrence of the epidemic of the winter of 1915–1916 in Washington, and especially by the occurrence of an outbreak among the pupil nurses of George Washington University Hospital. The bacteriological study of these cases was conducted by Dr. M. W. Lyon, Professor of Bacteriology and Pathology in the Medical Department of George Washington University,

Fifteen cases among the nurses, and seven from private practice showed a hemolytic streptococcus as the only pathogenic organism obtained from the secretions. One nurse showed the hemolytic streptococcus, together with the micrococcus catarrhalis. In one case of meningitis (fatal), in one case of pneumonia (fatal), in one case of suppurative mastoiditis, and in one case of empyema, all sequels of what was considered as grippe, the hemolytic streptococcus was obtained in pure culture from the inflammatory products. In one fatal case of pneumonia, it was the only pathogenic organism obtained. Attention is especially drawn to the fact that although a culture medium favorable to the growth of Pfeiffer's bacillus (blood agar) was employed, in no case was this organism obtained. The conclusion reached is that the epidemic of so-called grippe that affected the population of Washington during this winter was due to streptococcus infection.

The suggestion is advanced that under certain conditions the human organism becomes sensitized to streptococci, which are universally prevalent, but ordinarily innocuous.

A consideration of the factors that would predispose to this sensitization suggests a number of unhygienic conditions that prevail at this season. Chief among these would appear to be the rôle played by climatic conditions. Analysis of the weather conditions of the winter months of 1915–16 shows that there were rapid and extreme fluctuations of temperature, and that January had an average daily temperature of nearly 7 degrees higher than

* Read before the Medical Society October 25, 1916.

the normal for this month. The contrast is drawn with the winter of 1911–12, when there was severe and sustained cold, and which was remarkably free from disease of this character.

Dr. E. M. Schaeffer said that the interesting paper had described a winter with the same features of the weather at the first visitation of grippe in 1889–1890, when many doctors fell victim to the disease and several lost their lives. The weather at that time showed great vicissitudes of temperature, with much cloudiness. He described his own experiences with the grippe of that day.

Dr. W. M. Mason said that in his own practice he had taken cultures from many cases of the type described by Dr. Randolph and had uniformly found a streptococcus hemolyticus. He emphasized the importance of keeping grippe patients in the house for a time after the acute attack; but mastoid and sinus complications are to be expected if these patients go about too soon.

Dr. W. H. Huntington had seen some of the cases reported by Dr. Randolph and had been most impressed by the severity of the symptoms and the suddenness of the onset. He referred to the case of one young woman with mastoid disease in which there were very severe objective as well as subjective signs, but in whose mastoid cells very little exudate was found. During the period covered by Dr. Randolph's study, Dr. Huntington had been much impressed by the unusual prevalence of sinus infections as indicated by his experience in private practice.

Dr. S. S. Adams said that the most interesting part of the paper to him was that which referred to the influence of meteorological conditions on the incidence of disease. As he looked around the room he could see few who would remember very clearly the first recognized invasion of grippe during the winter of 1889–90; the disease was a veritable pandemic at that time and the period was marked by the great daily fluctuations of temperature and instability of weather. Many years ago he had written a paper upon the influence of meteorological changes on intestinal diseases of infants, and this was based in part upon studies he had made for Dr. Busey during the preparation of the latter's classic paper on the same subject. Dr. Adams thought that the condition described by Dr. Randolph was not true grippe; any one who had had the disease when it first appeared here would know the difference.

Dr. J. W. Chappell had told Dr. Randolph before the meeting that he had come to hear a good paper and he wished to say that he had not been disappointed. He could corroborate what Dr. Adams had said as to the difference between what is called grippe at the present time and the condition as it appeared during the two great epidemics of the disease. Dr. Chappell's own recollec-

tion was that the first epidemic was the more severe. It was during this time that the Pfeiffer bacillus was isolated, and for himself, he had no doubt that that organism was the true cause of the disease. Most bacteriologists have been saying that there is no such thing as "taking cold"; Dr. Randolph's paper demonstrated that there was such a thing and that it is constantly happening to people. It is all a question of how we react to climatic changes.

Dr. E. L. Morgan said that there was an epidemic of grippe in 1855; it was mentioned in old writings, but he was not prepared to say that it was identical with the epidemic of 1889.

Dr. Randolph expressed his appreciation of the discussion. He remembered the grippe epidemic of 1889–90, but not from the standpoint of a physician. He had the disease at the time, and many of his college mates had it also; it was a very severe disease at the time and some of the men came near dying of it. It seemed to him that the symptoms seen now are about the same. If Dr. Adams had heard the early part of the paper, he would have observed that the description of the cases reported tallied closely with the features in the old epidemics. Dr. Randolph called attention to the widespread and sudden outbreak of the disease in 1889–90; this could not have been due to case to case infection but must have been due to some general influence like meteorological conditions. He had also observed the effect of sudden weather changes on the intestinal diseases of children. He had not undertaken to say that Pfeiffer's bacillus will not cause the symptom complex we call grippe; there is abundant evidence to show that the organism is pathogenic at times; but it is not the cause of all epidemic catarrhs. The streptococcus will, however, be found very uniformly in such cases. He had been more and more impressed by the influence of the streptococcus in all sorts of disease states. The proposition he wished to advance particularly was that the streptococcus is present within the body all the time; that certain conditions of the body or its environment serve to sensitize it to the streptococcus at times and to allow of invasion by it with the production of disease. In view of the potentialities of streptococcus infection for harm, we should always treat colds more seriously.

In Memoriam.

DR. FRANCIS BESANT BISHOP.

A man of the highest character, a useful citizen, a skilled physician, died in Washington City, April the 30th, 1916. Dr. Bishop had a high appreciation of friendship and his worth won for him

friends in every walk of life. Many of the highest officials of the Government, as well as leaders in business, sought his professional skill and became his friends. In his profession he had the love and esteem of all his brothers. His beautiful home life we shall not try to describe. We recall, when more than twenty years ago, Dr. Bishop began to give his whole time to electrotherapeutics, how earnestly he tried to arrive at its true therapeutic value and lift it above the ignorance and quackery that surrounded it. The future historian of electrotherapeutics in faithfully recording those who diligently sought for truth in this field, must ofttimes mark his page with the name of Bishop.

His medical papers, both scientific and clinical, prove his mastery in this difficult field. His high rank received recognition, when in 1898, he was made President of the American Electrotherapeutic Association and in 1901 was sent as the American representative to the International Association at its convention in Liege, Belgium.

He was born at Wilmington, N. C., August 13, 1853. Married to Ella T. Knowles, August 6, 1874. During early boyhood, Dr. Bishop took employment in a hardware store in his native town. He continued in this employment for some years, when he left to enter a medical school at Charleston, S. C. For two years previous to this, however, he had been pursuing his studies privately with Dr. Henry S. Norcom, who in later years came to Washington and joined Dr. Bishop in practice. He graduated in medicine from the University of Maryland in the class of 1883 and began practice at Smithville (now Southport), N. C., where he remained about three years. Seeking wider fields, he came to Washington in 1886. Like all young physicians without means, the first years of practice in Washington presented many difficulties, which he overcame with courage and ability. Dr. Bishop left a wife and six children.

Resolved, That this Society express to his family its highest esteem for Francis Besant Bishop, and record that in the noble profession he chose he lived a life in keeping with its best traditions and ideals.*

(Signed) Philip S. Roy,
Isaac S .Stone,
W. P. Malone,
Committee.

DR. NEIL DUNCAN GRAHAM.

Dr. Neil Duncan Graham, son of Dr. N. F. and Harriet Southgate Graham, was born at Falls Church, Virginia, Sept. 22, 1874.

He was graduated in Medicine at Johns Hopkins University

*Adopted October 4, 1916.

Medical School in 1901. He also held the degree of B. S. from the same university.

He was engaged in the practice of medicine in this city from 1902 until within a few weeks of his death, which occurred August 25, 1916, at Falls Church, Va.

In 1904 he was married to Miss Elizabeth Farrow, of Baltimore. His wife and one daughter survive him.

He was Professor of Bacteriology, Hygiene and Preventive Medicine in the Medical Department of Howard University, and was Attending Obstetrician to Freedmen's Hospital. He was a member of the Medical Society of the District of Columbia, the Washington Medical and Surgical Society and the American Medical Association.

As a teacher Dr. Graham had the rare faculty of imparting knowledge in a few words in such a manner that the facts stayed with the students. As a practitioner of medicine, he was a keen diagnostician and an able and skillful obstetrician.

He was of a charming personality, modest, unassuming and cultured. His patients all loved him and the universal comment of his friends would be—he was a man.

Your committee presents the following resolutions:

Resolved, That in the death of Dr. Neil Duncan Graham the Society has lost a loyal member, the profession an earnest and skillful worker, the Medical School, a brilliant teacher, the family a devoted husband and father.

Resolved, That a copy of these resolutions be transmitted to his family to whom the sympathy of the Society is herewith extended.*

(Signed) Wm. A. Jack, Jr.,
Edward A. Balloch,
Norman R. Jenner,
Committee.

Washington, D. C., *October 18, 1916.*

The Medical Society of the District of Columbia:

The Historical Committee submits the following report in regard to the late Medical Association.

The first meeting at which the project of a Medical Association was formally presented was on January 4, 1833, the Regulations, &c., were adopted on the 11th, and officers were elected on the 18th. After an existence of 78 years and 6 months, on July 10, 1911, the Association was amalgamated with the Medical Society, the joined bodies taking the name of the latter. During this period the proceedings of the Association were recorded and the

*Adopted October 11, 1916.

records in the hands of the Committee comprise three books of minutes, a book of signatures, the correspondence since 1892, and other loose papers since about the same time. Prior to that date we find no records except the minutes. There were other records, especially the proceedings of the Standing Committee, which, however, have not come into our possession, and so far our inquiries have failed to ascertain their whereabouts. The minutes mention a safe, a trunk and desk as part of the property of the Association; the safe and desk Dr. Macatee reports are in his possession; it is for the Society to determine the disposition of them. Of the trunk we learn nothing.

The Regulations of the Association were published many times, namely, in 1833, 1845, 1848, 1854, 1861, 1870, 1873, 1875, 1890, 1893, 1899, 1901 and 1909. The editions of 1854, 1861 and 1870 were bound up with the corresponding publications of the Medical Society and the cost of publication was shared by each. Apparently two other editions, 1879 and 1884, were also published, but the Committee is without copies of them.

The material described has been carefuly gone over twice and the results have been arranged as follows:

1st. Two alphabetic lists have been made, one of the active and the other the associate members, each indicating the seniority number of the member.

2d. Two seniority lists have also been made, one of the active, the other the associate members, indicating the date of election when ascertainable, the date of signing the Regulations when stated, the corresponding seniority number in the list of the Medical Society, and other information.

3d. Lists of officers, alphabetically arranged, indicating their years of service.

4th. A history, chronologically arranged, containing excerpts from the minutes and loose papers, that seemed of enough interest to preserve as a permanent record in an easily readable form; and under separate topical heads, other material, as for instance the subject of "apothecaries," under which is arranged chronologically the action of the Association in regard thereto.

Alphabetic indexes are yet to be made. The subject of biographical sketches of the 205 members of the Association who never joined the Medical Society, has been considered and will be reported on later.

It is recommended that the Committee be authorized to have the material that has been arranged as indicated, neatly typewritten as a permanent record in an easily readable form, of the work of the Association, of 1,165 active and 45 associate members, covering a period of nearly 80 years. So far the work has been without any cost to the Society.

If eventually the Society should decide to publish this compilation, it can be condensed.

D. S. Lamb,
Chairman of Committee.

PROCEEDINGS OF THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA.

Wednesday, October 4, 1916.—The president, Dr. E. Y. Davidson, presided; about 75 members present.

The Treasurer presented his report for the months of June, July, August and September, showing receipts, $840.55; disbursed, $833.14.

The Chair announced the death of the following members, and appointed memorial committees:

Dr. Ernest F. King, died June 8, 1916; committee, Drs. Collins Marshall, H. A. Fowler and W. P. Malone.

Dr. Floyd V. Brooks, died June 25, 1916; committee, Drs. J. Wesley Bovée, D. Olin Leech and C. W. Richardson.

Dr. F. J. Woodman, died July 28, 1916; committee, Drs. W. E. Clark, H. H. Kerr and H. W. Jaeger.

Dr. Neil D. Graham, died August 25, 1916; committee, Drs. W. A. Jack, Jr., N. R. Jenner and E. A. Balloch.

Honorary member: Thos. A. Ashby, died June 18, 1916.

Dr. G. Wythe Cook reported the following recommendations from the Executive Committee:

(1) That a special committee be appointed to consider the general subject of the control of persons suffering from communicable forms of tuberculosis with the object of formulating a collective opinion upon this question.

(2) That the following resolution be adopted: "It is the sense of the Medical Society that it is inimical to the best interests of the Society for any member thereof to render professional services to the public gratuitously in connection with any public function in the District of Columbia, unless the request for such services is made through the Society."

(3) That the following amendment to the Constitution proposed by the Committee of Censors be set in motion for adoption by the Society: Amend Art. V, Sec. 14, by substituting for the words "any three members" the words "the Executive Committee."

(4) That members take notice of a ruling by the Commissioner of Internal Revenue that physicians changing their place of business must give notice of such change; failure to give notice will subject the physician to a fine of seventy-five cents.

Dr. Frank Leech, vice chairman of the Executive Committee, made a supplementary report for the committee, embodying

the recommendation that the Society tender a complimentary dinner to Dr. G. Wythe Cook on the occasion of his seventieth birthday, October 28, 1916, as a token of esteem and in recognition of his years of valuable service to the Society.

The recommendations were considered seriatim, and Nos. 1, 2 and 3 were adopted.

The recommendation made for the committee by Dr. Leech was adopted, and a committee was appointed by the President to arrange for a subscription dinner to be given under the auspices of the Society.

Dr. P. S. Roy, for a Memorial Committee, reported resolutions of respect to the memory of Dr. Francis B. Bishop; the report was unanimously adopted. See page 343.

The following resignations were presented: From active membership Drs. F. Fremont Smith, Milton Hahn, John W. Warner and R. L. Irvine. From associate membership: Capt. Dean C. Howard, U. S. Army, and Dr. John A. Ferrell.

Letters from the American Medical Association in regard to the study of Social Insurance and the control of the chartering of educational institutions were read and referred to the Executive Committee.

An appropriation of $67.50 was made to defray the cost of a stenographic report of the proceedings before the Board of Medical Supervisors in the Kemp case.

Dr. Charles W. Richardson brought formally to the attention of the Society the very serious illness of the Corresponding Secretary, Dr. A. L. Hunt, and moved that the Recording Secretary be instructed to write Dr. Hunt a letter expressing the sympathy of the Society. Dr. Kearney seconded the motion and offered to amend by instructing the Secretary to send flowers with the letter. Dr. Richardson accepted the amendment and said he would be glad to send the flowers in the name of the Society. The motion was unanimously carried.

Dr. Chas. A. Pfender read the paper for the evening, entitled: Roentgenism; Roentgenization in deep-seated benign and malignant diseases. Report of three cases: 1, Menopausic metrorrhagia; 2, Inoperable uterine carcinoma; 3, Metastatic carcinosis following primary mammary adenocarcinoma. Illustrated with lantern slides. Discussed by Drs. E. W. Burch, Jack, Atkinson, Groover, R. A. Hooe and Pfender. See page 323.

Wednesday, October 11.—President Davidson, presided; about 80 members present.

The Chair announced the death of the Corresponding Secretary, Dr. A. L. Hunt, and appointed as a Committee on Memorial: Drs. Charles M. Beall, R. A. Hooe and Frank Leech.

The Recording Secretary reported that he had sent the following letter of sympathy to Dr. Hunt during his illness as directed by resolution:

October 4, 1916.

DEAR DR. HUNT:

The Medical Society at its meeting to night by unanimous resolution has instructed me to write you this letter to give you fresh assurance that we are all thinking of you with the most affectionate sympathy, and we are all united in the earnest hope and the fervent prayer that you may soon be restored to us in perfect health. We are sending you these flowers as an evidence of our love.

Faithfully yours,

H. C. MACATEE,
Recording Secretary.

Dr. W. A. Jack, for a Memorial Committee, reported resolutions of respect to the memory of Dr. Neil Duncan Graham, which were adopted. See p. 357.

A letter was read addressed to the President by the National Social Unit Organization inviting him to serve on a committee of that body, together with his reply thereto.

A letter was read expressing the appreciation of the Citizens' Welfare Committee, National Guard and Volunteers, D. C., for professional services rendered by members of the Society.

The following resignations were accepted: From active membership, Drs. F. Fremont Smith, Milton Hahn, John W. Warner and R. L. Irvine. From associate membership: Maj. Dean C. Howard, U. S. Army.

It was ordered that at the next meeting the office of Corresponding Secretary be filled for the unexpired term, and that notice of an election for this purpose be given on the cards for that meeting.

Dr. Philip S. Roy reported three cases of Dilatation of the Right Ventricle (Conus Arteriosus). Discussed by Drs. Barton, Randolph, Chappell and S. S. Adams. Dr. Roy closed the discussion. See p. 343.

Dr. Chas. S. White read a paper entitled: The Diagnosis of Cancer of the Breast. Discussed by Drs. Wellington, Abbe, Jack, Rogers, Pfender, Roy and White.

Wednesday, October 18.—President Davidson presided; about 100 members present.

The Chair announced the appointment of the following Committee on the Control of the Tuberculous: Drs. Frank Leech, J. S. Wall, G. Wythe Cook, P. S. Roy, J. Lawn Thompson, J. B. Nichols snd W. M. Barton.

Dr. D. S. Lamb, for the Historical Committee, made a report of the work of that committee, and requested authority to have certain historical material typewritten. On motion, it was or-

dered that the report be published in the ANNALS, and the committee was authorized to have the necessary typewriting done. See p. 358.

Dr. C. W. Richardson, for the Committee on Dinner to Dr. Cook, reported progress.

Dr. J. Lawn Thompson was elected Corresponding Secretary for the unexpired term.

Dr. Tom A. Williams, as a matter of personal privilege, stated the facts regarding a situation in which he found himself before a district court of law; confronted with a requirement of the court to give evidence based on privileged communications. The matter was referred to the Executive Committee with power to act.

Dr. W. H. Syme reported a Case of Chronic Headache. Discussed by Drs. Tom A. Williams and Syme.

Dr. Jos. A. Murphy reported 17 cases of Poliomyelitis occurring among the Indians of the Crow Reservation. Discussed by Drs. P. Willson, Roy, Fricks, U. S. P. H. S., Williams and Murphy.

Dr. D. Percy Hickling read the paper for the evening, entitled: Psychoanalysis in its relation to Psychiatry. Discussed by Drs. Williams, Roy, Kober and Hickling. See p. 336.

Wednesday, October 25,—President Davidson presided; about 70 members present.

Dr. Cook, of the Executive Committee, presented a letter from the law firm of McLanahan and Burton suggesting the advisability of calling to the attention of the U. S. District Attorney the fact that Dr. T. J. Kemp is practicing medicine in spite of the revocation of his license, and asking authority of the Society to proceed in its behalf in the matter. Referred to the Executive Committee.

Dr. B. M. Randolph read the essay for the evening, entitled: Clinical Observations on So-called Grippe. Discussed by Drs. Schaeffer, W. B. Mason, Huntington, S. S. Adams, Chappell, E. L. Morgan and Randolph. See page 354.

A guest in the Squag House rang in the middle of the night and said:

"Landlord, the roof is leaking. I'm drenched."

"Very good, sir."

The landlord retired, and in a moment was back again with a large washtub.

"Here you are, sir," he said. "We'll just put this on your chest. When she's full ring again or yell, and I'll have an empty one ready."—*Exchange.*

WASHINGTON MEDICAL ANNALS.

Journal of the Medical Society of the District of Columbia.

Published Bimonthly by the Society, at No. 2114 Eighteenth Street, N. W., Washington, D. C. Subscription price, including postage, $1.00 per year, in advance. Single copies, 20 cents. Advertising rates given on application.

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Editorial.

HISTORY OF THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA.—Price $1.00, with 25 cents added if delivered in this city or sent by mail. Address Dr. C. W. Franzoni, 605 I Street, N. W. The books are in the custody of Dr. D. S. Lamb, at the Army Medical Museum.

THE WASHINGTON MEDICAL ANNALS, the official organ of the Medical Society of the District of Columbia, issued the first of January, March, May, July, September and November, will publish gratuitously such information of a medical, surgical and sanitary character, changes in personnel, &c., of hospitals, dispensaries, medical schools, medical societies and other medical agencies, as would be useful and interesting to the members of the Society. Address the Chairman of the Committee on Publication.

THE WASHINGTON MEDICAL ANNALS.—Back numbers.—Members of the Society who have back numbers of the ANNALS, and do not intend to preserve them, are requested to send them to the Chairman of the Publication Committee. Requests for such numbers are frequently received.

ADVERTISEMENTS.—Attention is invited to the advertisements in this issue. All the advertisers are reliable and responsible. It is suggested that they be given preference.

The 550 members of the Society by a little effort could largely increase the number of advertisements. Dr. Frankland is the member of the Committee on Publication who has charge of this matter.

THE OTHER MEDICAL SOCIETIES OF THE DISTRICT OF COLUMBIA.

CASUALTY HOSPITAL MEDICAL SOCIETY—Meets on the first Friday in October, December, February and April. President, C. B. Conklin; vice president, L. R. Schreiber; secretary, S. B. Pole; treasurer, W. P. Wood. It is composed of the following members: C. S. White, J. R. Wellington, H. Warner, A. P. Tibbets, W. C. Sparks, J. I. Sloat, H. L. Shinn, J. D. Rogers, W. P. Reeves, A. E. Pagan, C. J. Murphy, J. J. Mundell, F. V. Merewether, E. M. Miller, J. C. Blackistone, N. P. Barnes, C. C. Marbury, J. J. Madigan, D. O. Leech, H. Jeager, W. H. Huntington, R. M. LeComte, A. C. Gray, W. A. Frankland, R. F. Dunmire, F. Y. Donn, J. H. Diggs, G. C. Clark, S. Bricker, F. W. Braden, L. K. Beatty, F. V. Atkinson.

The object of the Society is to Promote the welfare of the Casualty Hospital and Eastern Dispensary.

CLINICAL SOCIETY.—Officers: W. J. Mallory, President; H. H. Donnally, Vice President; Wm. T. Davis, Secretary-Treasurer; Censors: J. D. Thomas and L. A. Johnson.

CLINICO-PATHOLOGICAL SOCIETY.—Active membership limited to 25. Inactive membership: those who have withdrawn from active membership after fifteen years. A limited honorary membership of eminent medical men. Meets on the first and third Tuesdays of the month from October to May, inclusive. Officers: President, G. Brown Miller; Vice Presidents, Loren Johnson and H. H. Kerr; Secretary and Treasurer, B. M. Randolph.

EMERGENCY HOSPITAL CLUB.—The club was organized early in 1915 by the members of the Staff of the Central Dispensary and Emergency Hospital. Meetings are held on the second Saturday of each month from September to May, inclusive; the officers are ——— ———, President; W. B. Carr, Vice President; D. W. Prentiss, Secretary and Treasurer.

FREEDMEN'S HOSPITAL MEDICAL SOCIETY.—Meets on the second Wednesday of each month from October to May, inclusive. Composed of physicians connected with the Staff of the Hospital and the Medical Faculty of Howard Medical School. Collins Marshall, President; C. A. Brooks, Vice President; C. A. Allen, Secretary-Treasurer.

GALEN SOCIETY of the District of Columbia. Organized September 1909.—E. C. Wilson, President; C. S. White, Vice President; E. W. Titus, Secretary-Treasurer. The membership is limited to twenty-five. The Society meets on the first Monday after the third Sunday of each month from October to May inclusive.

GEORGETOWN CLINICAL SOCIETY; twenty-five active members, limited to graduates of the Medical Department of Georgetown University. Meets at the University Club on the third Tuesday in the month. John Foote, President; J. Russell Verbrycke, Jr., Treasurer.

GEORGETOWN UNIVERSITY MEDICAL SOCIETY.—Meets on the fourth Saturday of the month at the University Hospital. The membership consists of the Alumni, Faculty and Senior Students of the Medical School. J. A. Gannon, President; T. F. Lowe, Vice President; J. M. Moser, Secretary-Treasurer.

GEORGE WASHINGTON UNIVERSITY MEDICAL SOCIETY.—Organized 1905; membership limited to Alumni of School and Members of the Faculty. Meets in the Medical Building on the third Saturday of each month from October to May. President, E. P. Copeland; Vice President, W. H. Huntington; Treasurer, E. G. Seibert; Secretary, C. B. Conklin; President's Council, J. B. Nichols, W. W. Wilkinson, J. Lawn Thompson, John Van Rensselaer. Active membership, 162.

HIPPOCRATES SOCIETY; membership limited to 25, with voluntary retired members after 10 years; meets on the second Thursday of the month from October to May. Officers for the year: J. R. Verbrycke, Jr., President; C. A. Simpson, Secretary.

MEDICAL HISTORY CLUB of Washington, D. C.—Officers: President, Frank Baker; Vice President, H. W. Lawson; Secretary, F. J. Stockman; Executive Committee, J. H. Bryan, Howard Hume, W. J. Mallory and the Officers. Members: Truman Abbe, Frank Baker, W. C. Borden, Joseph H. Bryan, G. Wythe Cook, John Foote, F. H. Garrison, Howard Hume, H. W. Lawson, W. J. Mallory, John B. Nichols, P. S. Roy, F. J. Stockman, I. S. Stone, John D. Thomas, Wm. A. White.

MEDICAL AND SURGICAL SOCIETY of the District of Columbia.—President, E. P. Copeland; Vice President, H. H. Kerr; Secretary and Treasurer, L. Eliot; Asst. Secretary, J. H. Talbott; Executive Council, John Dunlop, H. P. Parker, H. G. Fuller, L. H. Reichelderfer and Eliot. The Society membership is limited to 25 active members; 10 honorary members; and inactive members, those who have completed a term of ten years service. The meetings are held on the first Thursday in each month from October to May.

SOCIETY OF MEDICAL JURISPRUDENCE, Washington, D. C. —President, Dr. D. P. Hickling; Vice President, J. M. Kenyon; Secretary-Treasurer, Spencer Gordon. Meets on the second Monday of each month from October to June at University Club. Has from forty to fifty members.

SOCIETY OF OPHTHALMOLOGISTS AND OTOLOGISTS, Washington, D. C., meets the third Friday of each month from October until May, inclusive. Officers: President, A. H. Kimball; Vice President, Mead Moore; Secy.-Treasurer, Carl Henning, The Rochambeau. Active members: A. B. Bennett, Jr., J. W. Burke, V. Dabney, W. T. Davis, L. S. Greene, C. M. Hammett, Carl Henning, W. H. Huntington, E. B. Jones, A. H. Kimball, R. S. Lamb, F. B. Loring, O. A. M. McKimmie, W. B. Mason, M. E. Miller, Mead Moore, S. B. Muncaster, W. S. Newell, J. J. Richardson, G. S. Saffold, E. G. Seibert, E. A. Taylor, R. R. Walker, W. A. Wells. Inactive members: J. H. Bryan, W. K. Butler, Wm. H. Fox, W. P. Malone, H. A. Polkinhorn, C. W. Richardson, D. K. Shute, W. H. Wilmer. Associate Member: T. C. Lyster, U. S. Army.

SOCIETY FOR MENTAL HYGIENE of the District of Columbia.—Board of Directors: Miss Cornelia Aldis, Surg. Gen. Rupert Blue, P. H. S., Gen. L. E. Coffer, Chief Justice J. H. Covington, Frederick A. Fenning, Lieut. Col. H. C. Fisher, U. S. A., Dr. D. Percy Hickling, Mrs. Archibald Hopkins, Dr. Loren B. T. Johnson, Miss Bessie Kibbey, Dr. George M. Kober, Miss Julia Lathrop, Dr. Frank Leech, Mrs. John McLaughlin, Hon. Stephen P. Mather, Mrs. Wesley Merritt, Mrs. Seaton Perry, Miss Janet Richards, Hon. Cuno H. Rudolph, Mrs. Geo. H. Schiebly, Miss Nellie Sedgley, Mrs. Henry G. Sharp, Mrs. George Sutherland, Mrs. Carl Vrooman, Mrs. Norman Williams, Dr. Wm. A. White, Hon. Simon Wolf, Dr. Wm. C. Woodward, Mrs. Paul Worburg.

President, Gen. Rupert Blue; Vice President, Cuno H. Rudolph; Treasurer, Miss Nellie Sedgley; Dr. Wm. A. White, Chairman Executive Committee; Dr. D. Percy Hickling, Secretary. Chief objects of the committee: To work for the conservation of mental health; for the prevention of mental disease and mental deficiency and for the improvement in the care and treatment of those suffering from nervous or mental diseases or mental deficiency.

SOCIETY OF SOCIAL HYGIENE, Washington, D. C.—President, Dr. Charles F. Stokes, U. S. Navy; Secretary, Lt. Col. J. R. Kean, U. S. Army, Surgeon General's Office. The Society has four committees, namely: Education, Venereal Diseases, Protection of Women and Children, and Psychopathology. Yearly dues, $1.00. Persons desiring to become members should address Col. Kean and state to which committee they wish to be assigned.

THERAPEUTIC SOCIETY of the District of Columbia.—Meets at the G. W. School of Pharmacy, 808 I Street, N. W., on the first Saturday in each month. E. W. Burch President; A. P. Tibbets, Secretary.

WALTER REED MEDICAL SOCIETY meets on the fourth Thursday of every other month, from September to May inclusive. Composed of physicians located in the eastern part of Washington. J. S. Arnold, President; H. R. Schreiber, Vice President; M. H. Prosperi, Secretary; N. E. Webb, Treasurer.

WASHINGTON MEDICAL AND SURGICAL SOCIETY.—President, ——— ———; Vice President, R. R. Walker; Secretary, Walter Van Sweringen; Treasurer, F. E. Gibson; Curator and Librarian, E. H. Egbert; Executive Committee: L. H. Taylor, Chairman, G. S. Clark, G. S. Barnhart; Program and Auditing Committee: Wm. A. Jack, Jr., Chairman, J. R. Nevitt, Walter Van Sweringen; Membership Committee: F. E. Gibson, Chairman, Wm. P. Reeves, Caryl Burbank.

WASHINGTON OBSTETRICAL AND GYNECOLOGICAL SOCIETY. —President, J. F. Moran; Vice Presidents, G. B. Miller, Prentiss Willson; Secretary, Truman Abbe; Treasurer, D. W. Prentiss. Retired members—G. N. Acker, S. S. Adams, E. A. Balloch, J. W. Bovée, W. S. Bowen, W. P. Carr, G. Wythe Cook, M. F. Cuthbert, H. D. Fry, J. T. Johnson, D. G. Lewis, A. R. Shands, E. E. Morse, Elmer Sothoron, J. Ford Thompson, John Van Rensselaer.

WASHINGTON PSYCHOANALYTIC SOCIETY.—Meets the second Saturday of each month, from October to May, inclusive. Officers: President, Edward J. Kempf; Vice President, Robert Sheehan, U. S. N.; Secretary and Treasurer, Dr. Mary O'Malley. Program Committee: Robert Sheehan, U. S. N., Dr. D. Percy Hickling and John E. Lind.

WASHINGTON SOCIETY OF NERVOUS AND MENTAL DISEASES. —President, Wm. H. Hough; Vice President, ——— ———; Secretary, J. J. Madigan. The Society has a limited membership of thirty, but welcomes Physicans and Surgeons interested in Neurology and Psychiatry. Meets monthly on the third Thursday at the Cosmos Club or a member's residence.

THE WASHINGTON SURGICAL SOCIETY.—Meets at 1621 Conn. Ave. the third Friday of the month at 8 P. M. The officers are H. A. Fowler, President; D. W. Prentiss and Walter Webb, Vice Presidents; H. G. Fuller, Secretary, and J. A. Gannon, Treasurer. Members of Council, H. D. Fry, J. F. Moran and the officers.

WOMEN'S MEDICAL SOCIETY of the District of Columbia. —President, Emma Lootz Erving; Vice President, Louisa M. Blake; Secretary and Treasurer, Martha M. B. Lyon; Corresponding Secretary, Mary Holmes.

THE SECRETARIES of the other Medical Societies of this District are reminded that the ANNALS will publish the schedules of their meetings.

AMENDMENTS TO THE CONSTITUTION AND BY-LAWS.—The following amendments have been made since the publication in Volume XII, March, 1913.

Constitution.—Article V, Section 4, adopted Nov. 4, 1914: before the words "Due notice" on page 142, insert "No application for membership that is rejected or withdrawn shall be renewed until after two years from the time of its rejection or withdrawal."

Section 10, same article; adopted Jan. 7, 1914: for "two years" substitute "one year." At the end of the section, add the words "Members so dropped may, after report by the Committee of Censors, be reinstated by the Society upon the payment of arrears in dues." Adopted March 1, 1916.

Article VI, Section 5, adopted Jan. 6, 1915: in the last line, for "two" substitute "three."

Article VIII, Section 2, page 148, 4th line from top: for the word "disorders" substitute the word "diseases."

Article IX, Section 2, first line, for the word "four" substitute "five." Adopted March 1, 1916.

By-Laws.—Article VIII, Section 9, page 153, adopted Jan. 7, 1914: No member of the Staff of any hospital receiving patients in private rooms shall attend such private patient sent to the hospital by a member of the Society, not a member of the Staff, unless specifically requested to do so by the attending physician.

Please note that the figures in Sections 7 and 8 of this article, instead of being 7 and 8 should be 5 and 6.

SOME SPECIAL COMMITTEES OF THE SOCIETY:

On First Aid Conference.—Drs. C. S. White, H. H. Kerr and W. P. Reeves.

On National Legislative Committee.—Dr. L. B. T. Johnson.

On Regulation for Control of Contagious Diseases.—Drs. Frank Leech, H. H. Donnally, S. S. Adams, W. C. Woodward, N. P. Barnes, J. S. Wall and L. B. T. Johnson.

On Meeting Place of Society.—Drs. G. Wythe Cook, A. B. Hooe, A. R. Shands and J. D. Thomas.

On American Red Cross.—Drs. L. H. Reichelderfer and L. B. T. Johnson

Memorial Committees.—On the death of Dr. Winter: Drs. Lemon, Holden and Sorrell. On the death of Dr. Lynch: Drs. Kinyoun, Frank Leech and W. C. Fowler. On the death of Dr. Walker: Drs. Ecker, Waters and Cole. On the death of Dr. King: Drs. Marshall, H. A. Fowler and Malone. On the death of Dr. Brooks: Drs. Bovée, D. O. Leech and C. W. Richardson. On the death of Dr. Woodman: Drs. Clark, Kerr and Jaeger. On the death of Dr. Hunt: Drs Beall, R. A. Hooe and Frank Leech.

Centennial Committee.—Dr. Nichols, Chairman; Drs. D. S. Lamb, G. Wythe Cook, Roy, W. P. Carr, Kober, Boswell, Tayler-Jones, Macatee, S. S. Adams, Chas. Richardson, A. B. Hooe, J. D. Thomas and Frank Hagner.

Committee on Cancer.—Drs. Karpeles, Frank Hagner, Balloch, W. C. Borden, W. P. Carr, Vaughan, J. F. Mitchell, Sprigg, C. W. Richardson, Gannon and Abbe.

Committee on Control of the Tuberculous: Drs. Frank Leech, Wall, G. Wythe Cook, Roy, J. Lawn Thompson, Nichols and Barton.

STARMONT SANATORIUM.—Gen. Sternberg's Home for Treating Tuberculosis.—The attention of the members of the Society is called to this purely philanthropic enterprize. General Sternberg was the originator and founder of this institution, and your earnest solicitation is requested in furthering the good work of this undertaking by referring patients to the Sanatorium. Incipient and moderately advanced cases are accepted. The rates vary from $12.50 to $20, depending upon the condition of the patient, the quarters and necessary service. Full information will be forwarded on application. Phone connection. Address Dr. L. F. Kebler, Washington Grove, Md.

SPECIAL LABORATORY OR CLINICAL WORK.—Members of the Society who are doing special work, laboratory or clinical, are requested to send name and subject to the Editor. This is not for publication, but for information and reference. Thus, a number of members are doing x-ray work; some limit their practice entirely or mainly to a specialty. The Editor is frequently asked in regard to these things and is unable sometimes to answer satisfactorily.

MEDICAL PREPAREDNESS.—Advisory Committee of Civilian Physicians and Surgeons: Wm. J. Mayo, Rochester, Minn., Chairman; F. F. Simpson, Pittsburgh, Pa., Secretary. Object, through coöperation with the public services to establish an organization to make a comprehensive survey of the medical resources of the country available for use in peace and war; to include the names of medical men available for home or field duty, who are trained in the specialties of medicine, surgery and sanitation; also the equipment of medical institutions; facilities of transportation of sick and wounded; food and drug supplies; lists of trained nurses, &c. Also to aid in the care of sick and wounded and in the elimination of preventable diseases. The members of the committee for the District of Columbia are as follows: G. T. Vaughan, Chairman; E. Y. Davidson and H. C. Macatee, *ex officio*; S. S. Adams, J. W. Bovée, J. F. Mitchell, J. J. Richardson, I. S. Stone and W. H. Wilmer.

ALCOHOLISM AND INEBRIETY.—A Research Foundation has recently been organized at Hartford, Conn., for the purpose of making an exact scientific study of this question. It will be endowed and become a permanent work. Preliminary studies have already begun, and practicing physicians from all parts of the country are appealed to for the records and histories of cases which will be compiled and tabulated for the purpose of determining the laws which control and govern them.

This is the first scientific effort to take up the subjects of alcoholism and inebriety and determine the causes which produce them outside of alcohol. Science has shown that these conditions are governed by exact physical and psychical laws, which if known and understood would indicate the most practical means and measures of relief.

The foundation will be practically a laboratory or clearing house, where persons can come for examination, counsel and advice. To a large class of persons who want something more than pledges, appeals or sanatorium treatment, this will open a new field of means and measures for relief that will be most welcome.

Correspondence is earnestly solicited from the profession. Address Dr. T. D. Crothers, Hartford, Conn.

UNITED STATES PUBLIC HEALTH SERVICE.—Congress has recently made an appropriation for 33 additional Assistant Surgeons in the United States Public Health Service. These officers are commissioned by the President and confirmed by the Senate. The tenure of office is permanent, and successful candidates will immediately receive their commissions.

After four years' service Assistant Surgeons are entitled to examination for promotion to the grade of Passed Assistant Surgeon. Passed Assistant Surgeons after twelve years' service are entitled to examination for promotion to the grade of Surgeon.

Assistant Surgeons receive $2,000, Passed Assistant Surgeons $2,400, Surgeons $3,000, Senior Surgeons $3,500, and Assistant Surgeon-Generals $4,000 a year. When quarters are not provided, commutation at the rate of $30, $40 and $50 a month, according to the grade, is allowed.

All grades receive longevity pay, 10 per cent. in addition to the regular salary, for every five years up to 40 per cent. after twenty years' service.

Examinations will be held every month or so in various cities for the convenience of candidates taking the examination. Further information will be furnished by addressing the Surgeon-General, United States Public Health Service, Washington, D. C.

NOTIFIABLE DISEASES IN WASHINGTON, D. C., their prevalence in 1915. From the Public Health Reports, June 30, 1916, pp. 1676–1686.

Diphtheria, 645 cases, 28 deaths; measles, 1,940 cases, 5 deaths; scarlet fever, 794 cases, 8 deaths; smallpox, 15 cases, no deaths; epidemic cerebro-spinal meningitis, 5 cases, 6 deaths; pellagra, 22 cases, 16 deaths; acute anterior poliomyelitis, 6 cases, 2 deaths; tuberculosis, 1,095 cases, 734 deaths; typhoid fever, 359 cases, 42 deaths. Malaria, gonorrhoea, syphilis and rabies, no cases reported.

Association for the Study of Internal Secretions.—An association under the above name has been formed and has begun publication of a periodical called *The Link*. In the first (September) number is a list of about 300 members, including two Washington men, Drs. T. A. Williams and R. S. Lamb. The organizing committee comprises Dr. Barker of Johns Hopkins, Goetsch of Baltimore, Daland of Philadelphia, DeBuys of New Orleans, Harrower of Los Angeles, Hoxie of Kansas City, and Potts of Omaha. The object of the association is to collect and critically value papers published on the internal secretions. For further information address Dr. H. R. Harrower, Glendale, Los Angeles, Cal.

A new journal, the *Journal of Cancer Research,* the official organ of the American Association for Cancer Research, has appeared. A quarterly. Subscription, $5.00 a year, postpaid. Edited by Dr. Richard Weil, 970 Park Avenue, New York City. Published by Williams and Wilkins Co., 2419–21 Greenmount Avenue, Baltimore, Md.

The Southern Medical Association will hold its annual meeting at Atlanta, Ga., November 13–16. For further information address Southern Medical Association, Empire Building, Birmingham, Ala.

American Association of Anatomists, annual meeting Dec. 27–29, New York City, at the Anatomical Laboratories of the Columbia, Cornell and New York Universities.

The U. S. Navy.—Legislation has recently been enacted which will provide for approximately 300 additional medical officers in the Medical Corps of the United States Navy. The pay ranges from $2,000 per year, with quarters or an allowance therefor, for Assistant Surgeons with the rank of Lieutenant, Junior Grade, to $8,000 with allowances upon attaining the grade of Medical Director with the rank of Rear Admiral of the upper half. Applicants must be between the ages of 21 and 32 years, citizens of the United States, and must submit satisfactory evidence of preliminary and medical education. The examination for appointment in the Medical Corps consists of two stages, the

first stage, securing appointment in the Medical Reserve Corps, and the second stage, securing an appointment as a commissioned officer in the regular Medical Corps. After the candidate passes the preliminary examination he attends a course of instruction at the Naval Medical School. During this course he receives full pay and allowances of his rank, and at the end of the course he takes a final examination. Two of these courses begin each year, one commencing about the first of October, and the second course beginning early in February. The examinations are held in several of the coast cities in the United States, both on the east coast and the west coast, and also at Chicago, Ill. Literature describing the Navy as a special field for medical work, and circulars of information for persons desiring to enter the Medical Corps, may be obtained by addressing the Surgeon General, U. S. Navy, Navy Department, Washington, D. C.

The Following Letter has been received from the chairman of the Legislative Committee of the National Association of Manufacturers of Medical Products, an association of American manufacturers and producers of chemical, pharmaceutical and biologic products, plasters, surgical dressings, etc., intended ultimately to be prescribed and used by physicians, veterinarians and dentists.

"The experience of the members of this Association is that the health and even the life of the patient has often been endangered because the manufacturers could not mail an emergency preparation which the physician's druggist had telegraphed for, without running the risk of being fined $1,000 or imprisoned for two years.

"At the instance of the Legislative Committee of this Association a bill has been introduced in Congress to remedy this evil, the features of which are fully set forth in the enclosed pamphlet giving the bill, the present law and other information.

"The writer trusts this measure will have the unqualified support of your journal, and would be glad to receive your comments upon it. If any objections occur to you after reading the pamphlet herewith, kindly advise him in the enclosed envelope so that he may either meet or answer them to your satisfaction."

Health News, issued by the United States Public Health Service.

The Constitution of the United States doesn't mention health.

Procrastination in sanitary reform is the thief of health.

A book on "Exercise and Health" may be had free for the asking from the U. S. Public Health Service.

Not everybody can achieve greatness, but everybody can be clean.

If you sow a hygienic habit you reap health—reap health and you attain longevity.

Railway cars would be sanitary if it weren't for the persons in them.

America's typhoid fever bill is more than $270,000,000 a year.

The full dinner pail is the enemy of tuberculosis.

One million two hundred thousand Americans die each year, it is estimated.

Heart disease, pneumonia and tuberculosis cause more than 30 per cent. of deaths.

Sickness lowers earning capacity.

The U. S. Public Health Service is the nation's first line of defense against disease.

Disease is the nation's greatest burden.

Sunlight and sanitation, not silks and satins, make better babies.

Low wages favor high disease rates.

A female fly lays an average of 120 eggs at a time.

Maintain a polluted well and then complain about the undertaker's bill.

Think screening is too expensive and then blame your malaria on the climate.

Insist on sanitary cigar factories and then use a public cigar cutter.

Carry a fine handkerchief and then forget to cover your mouth when you cough.

Believe in national preparedness and then fail to keep yourself physically fit.

Wash your face carefully and then use a common roller towel.

Go to the drug store to buy a tooth brush and then handle the entire stock to see if the bristles are right.

Swat the fly and then maintain a pile of garbage in the back yard.

A soldier may have good feet, good eyesight, and good brains, but if he has bad teeth, he can't eat. If he can't eat he can't march near enough to the enemy to see him and use his brains to fight him. How does a soldier get good teeth? By having good teeth in childhood. How do children keep good teeth? Through being taught by their mother how to keep their teeth clean and having their teeth looked after while they are growing. This makes good teeth for future soldiers. It would seem then as though the first patriotic duty of a mother was to keep her children's teeth in good condition.

It is.

Dr. L. D. Bulkley, his annual custom, will give a series of clinical lectures on Diseases of the Skin in the outpatient hall of the New York Skin and Cancer Hospital, Second Avenue and 19th

Street, New York City, on Wednesday afternoons, beginning November 1st. The lectures are free to physicians on presenting their professional cards.

REVIEWS.

DISEASES OF THE SKIN, by RICHARD L. SUTTON, M. D., Professor of Diseases of the Skin, University of Kansas School of Medicine; former Chairman of the Dermatological Section of the American Medical Association; member American Dermatological Association; Assistant Surgeon, United States Navy, Retired; Dermatologist to the Christian Church Hospital. With 693 illustrations, and 8 colored plates. St. Louis: C. V. MOSBY COMPANY, 1916.

After several years of study Dr. Sutton has attempted in this work to present the entire subject of dermatology in a comprehensive and at the same time, concise manner. It is very evident that he has made an earnest endeavor to present to the profession a complete treatise on skin disease. There is special emphasis laid on the pathology of the skin. The symptoms, etiology and treatment are also given ample consideration. He does not claim to have based his writing on a personal knowledge of the subject alone, but has drawn from the publications of many eminent authors. Colored plates are of great assistance to one not so familiar with the true appearance of the various skin affections and also an aid in making a diagnosis. This volume, unfortunately, has a scarcity of such plates. Those shown are: Plate I. Foot and Mouth Disease in Man, showing color, size and Distribution of the Vesicles in the mouth in a typical manner. Plate II. Foot and Mouth Disease in Man, showing Character and Distribution of Lesions on the Hands. Plate III. Foot and Mouth Disease in Man, showing Desquamation in late stage of Disease. Plate IV. Angiokeratoma of Scrotum, showing Size and Distribution of the Lesions in a Typical example of the Disorder. Plate V. Naevus Linearis, Moderate Magnification. Plate VI. Hemorrhagic Sarcoma of Kaposi. Plate VII. Lupus Erythematosus, showing Characteristic Distribution of Lesions. Plate VIII. Ulcerating Granuloma of the Pudenda, Section from the Advancing Margin of Lesion. The black prints, although fairly good and containing Uta, or Espundia, and Cutaneous Thrush, which have never been pictorially represented in any book, do not depict clinical characteristics sufficiently to be of much assistance to the general practitioner.—F. W. BRADEN.

MEDICAL AND SURGICAL REPORTS OF THE EPISCOPAL HOSPITAL, PHILADELPHIA, PA., Vol. III, 1915; 352 pages; many illustrations. Twenty-five contributors of articles, five of which are medical,

twelve surgical, one oral, one nasal, one laryngeal, one obstetrical, eight ophthalmological, six orthopedic, one dermatological and one dental. All the articles are well written and interesting. It would well repay one to consult this volume.—D. S. LAMB.

HOW TO LIVE.—Rules for healthful living based on modern science. Authorized by and prepared in collaboration with the Hygienic Reference Board of the Life Extension Institute, Inc. By IRVING FISHER, Chairman, Professor of Political Economy at Yale University, and Dr. E. L. Fisk, Director of Hygiene of the Institute. 5th edition, 1916. FUNK AND WAGNALLS CO., New York City.

There is a foreword by ex-President Taft. This book of 325 pages, with full index, is an exposition of how to live, from the point of view of the Hygienic Reference Board. The Board comprises well-known men in the field of statistics, public health administration, medicine, surgery, chemistry, bacteriology, pathology, physiology, biology, eugenics, organized philanthropy, education, industrial hygiene, moral hygiene and physical training. The subjects treated are air, food, poisons, activity, and hygiene in general; with supplementary notes on special subjects. There are very few if any of the statements to which objection can be made by the educated physician or intelligent layman. It is a good book for ready reference. It would be an education to laymen and more or less to physicians. It is to be recommended to everybody. It is to be presumed that all the readers of the ANNALS know of the Life Extension Institute; if any do not, the Head Office is at 25 West 45th St., New York City.—D. S. LAMB.

MORTALITY STATISTICS FOR 1914. Bureau of the Census. Based on records of the registration area, which contains 65 million population, just about two-thirds of the estimated population of the United States. The registered deaths were 898,059, a death rate of 13.6 per thousand population, the lowest death rate so far recorded for the registration area. Of these deaths 54.7 per cent. were males, 45.3 females; 91.8, whites, 8.2, colored; the colored includes 1,018 Chinese, 904 Japanese, 1,369 Indians, 7 Hindus, 5 Hawaiians, 4 Koreans, 3 Filipinos, 1 Malay. Of the 824,319 deaths of whites, 207,272 were in persons of foreign birth, and 203,189 had one or both parents of foreign birth. Nearly one-fourth of all deaths were in children under 5 years, nearly one-fifth, under one year. The death rate of Washington was 16.6; for whites 13.8, colored 23.3. Of the population of Washington, the colored was 28.7 per cent. Of the total deaths, 10.4 per cent. were from organic disease of heart; 10.8 from tuberculosis; 9.4 from tuberculosis of lungs; 7.5 from acute nephritis and Bright's Disease; 5.8 from congenital debility and malformation; 5.8 from pneumonia; 5.8 from malignant tumors; 4.8 from diarrhoea and

enteritis in children under 2 years; 4.6 from diseases of respiratory organs except tuberculosis and pneumonia; 1.1 from typhoid fever; 1.3 from diphtheria and croup; 1.2 from diseases of stomach, except cancer; 1.5 from senility; 6.3 from violent deaths, except suicide, from which 1.2 per cent. Since 1900 typhoid fever mortality has diminished more than 50 per cent; measles, 50; scarlet fever is one-third less; whooping cough one-sixth less; diphtheria 60 per cent. less; tuberculosis, all forms, 25 per cent. less; pneumonia, all forms, nearly 25 less; diarrhoea and enteritis in children under 2 years, nearly 50 per cent. Cancer has increased nearly 25 per cent.; apoplexy nearly 20 per cent.; organic disease of heart 20 per cent; Bright's Disease about 1 per cent.—D. S. Lamb.

RECENT PUBLICATIONS BY PHYSICIANS IN THE DISTRICT OF COLUMBIA.

W. M. Barton; Manual of vital function testing methods; Review in *St. Paul Med. Jour.*, October, 330; in *Buffalo Med. Jour.*, October, 132, and *Pacific Med. Jour.*, September, 573.

C. Bates; Handling of shucked oysters; *Amer. Jour. Pub. Hlth.*, September, 987.

C. Bates and L. A. Round; Comparison of bacteriologic methods for examination of oysters; same journal, August, 841.

A. B. Bennett; Gram stain in making bacteriologic diagnosis in otolaryngology; *Annals Otology, &c.*, June, 1331.

H. G. Beyer, U. S. N.; Some of Prof. Lexer's work at Red Cross Auxiliary Naval Hospital, Germany; Bull. Johns Hopkins Hosp., September, 267, and *Military Surgeon*, August, 134.

W. A. Bloedorn, U. S. N.; Studies of industrial accidents which occurred in the Navy Yard at Washington, D. C.; U. S. Naval Med. Bull., October, 585.

J. W. Boveé; Past, present and future of gynecology, obstetrics and abdominal surgery; *Surg., Gynec. and Obst.*, September, 290.

J. H. Bryan; On the relation of the diseases of the accessory sinuses to diseases of the eye, especially in children, with report of two cases; *Louisville, Mo., Jour. Med. and Surg.*, October, 143.

C. N. Chipman; Lack of team work in the operating room; *Va. Med. Semi-Mo.*, Sept. 8, 271.

G. W. Cook; American medicine of the eighteenth century; *N. Y. Med. Jour.*, August, 351.

E. P. Copeland; Fever of obscure causation in infancy and early childhood; *Jour. A. M. A.*, Nov. 4, 1346.

R. H. Creel, P. H. S.; Fumigation by cyanide gas; *Mil. Surg.*, September, 282.

W. T. Davis; Ocular complications of malaria and toxic effect of quinine on the eye; *South. Med. Jour.*, September, 769.

H. H. Donnally; Scarlet fever, morbidity and fatality; *Amer. Jour. Dis. Child.*, September, 205; abstract in *St. Paul Med. Jour.*, September, 286, and *Jour. A. M. A.*, Sept. 16, 902.

H. E. Dunne; Diseases of rectum and their treatment by conservation and radial methods; *Jour. Amer. Inst. Homoeopathy*, July.

W. E. Eaton, U. S. N.; The reorganization of the Hospital Corps.; U. S. Naval Med. Bull., October, 654.

A. Eichhorn and B. Gallagher; Spontaneous amebic dysentery in monkeys; *Jour. Infect. Dis.*, September, 395.

A. M. Fauntleroy, U. S. N.; Surgical lessons of European war; *Annals Surg.*, August, 136.

J. Foote and R. Hamilton; Congenital occlusion of bile ducts; *Amer. Jour. Obst.*, September, 521.

Carroll Fox, P. H. S.; Public Health administration in Nebraska; Reprint 348 from Pub. Hlth. Reports, July 7.

F. Fremont-Smith; Treatment of diabetes; *Bost. Med. and Surg. Jour.*, Oct. 5, 476.

F. H. Garrison; Armand Trousseau, a master clinician; *Internat. Clinics*, iii, 1916.

W. C. Gorgas and F. H. Garrison; Ronald Ross and the prevention of malarial fever; *Scient. Monthly*, August.

T. S. D. Grasty; Acute lymphatic leukemia, report of case; *Amer. Jour. Obst.*, October, 669.

F. R. Hagner; Large abdominal sarcoma in a two-year-old child; *Va. Med. Semi-Mo.*, Oct. 13, 321.

H. H. Hazen; Diseases of skin; Review in *South. Med. Jour.*, September, 846. Also, Diagnosis of cutaneous cancer; *ibid.*, 790. Also, Skin cancer; Review in *Jour. Mo. State Med. Assn.*, September, 475; in *West. Med. Times*, September, 118; in *West Va. Med. Jour.*, September, 112; in *Med. Record*, N. Y., Oct. 7, 650; in *Jour. A. M. A.*, Nov. 4, 1389; in *Northwest Med.*, October, 350; in *Calif. State Jour. Med.*, October, 418, and *Amer. Jour. Surg.*, October, 334.

W. B. Hetfield; The upper Yangtze river, sanitary notes; from U. S. S. Monocacy. Also, Some aspects of medical interest of the recent uprising in China; U. S. Naval Med. Bull., October, 757 and 760.

A. Jacobi and F. H. Garrison; Henry Leopold Elsner.

H. W. Jones; Method of anerobic plating permitting observation of growth; *Jour. Bact.*, May, 339.

J. T. Kelley, Jr.; Cholecystitis and appendicitis; *Va. Med. Semi-Mo.*, Oct. 27, 353.

G. M. Kober and W. C. Hanson; Diseases of occupation and vocational hygiene; Review in *Buffalo Med. Jour.,* October, 136.

L. A. LaGarde, U. S. A.; Relation of civilian physician to national preparedness; *Mil. Surg.,* September, 237.

R. S. Lamb; Cyanosis retinæ et conjunctivæ in connection with pulmonary stenosis and patent ductus arteriosus; *Trans. Amer. Ophthal. Soc.,* 1916.

M. W. Lyon, Jr.; The animal diet of early man; *Science,* Sept. 22, 426; abstract in *Jour. A. M. A.,* Oct. 21, 1234.

W. J. Mallory; Coins and medals in medicine; *Med. Record,* N. Y., Sept. 16, 495.

G. L. Meigs; Other factors in infant mortality than milk supply and their control; *Amer. Jour. Pub. Hlth.,* August, 847.

G. B. Miller; Etiology of sterility in women; *Amer. Jour. Obst.,* September, 450.

J. A. Murphy; Poliomyelitis on the Crow reservation; *Jour. A. M. A.,* Oct. 21, 1247.

J. B. Nichols; Pathologic and therapeutic bearings of elimination of body heat; *Med. Record,* N. Y., Sept. 16, 492.

E. M. Parker and S. D. Breckinridge; Surgical and gynecological nursing; Review in *South. Med. Jour.,* September, 849, and *Jour. Iowa State Med. Society,* October, 446.

D. W. Prentiss; Syphilis of uterus; *Amer. Jour. Obst.,* September, 480.

W. H. Rand; Latent features in diagnosis and prevention of some occupational poisonings; *Amer. Jour. Pub. Hlth.,* August, 830.

B. H. Ransom; Occurrence in United States of certain nematodes of ruminants, transmissible to man; *N. O. Med. and Surg. Jour.,* October, 294.

E. H. Reede; Relation of mouth infection to goiter; WASH. MED. ANNALS, July 230; abstract in *Louisville, Mo., Jour. Med. and Surg.,* September, 120.

C. W. Richardson; Abscess of lung following operation on tonsils and upper air tract; *Laryngoscope,* July; abstract in *Annals Surgery,* September, 311.

J. L. Riggles; Relation of convulsions to pelvic diseases; *Amer. Jour. Obst.,* October, 662.

W. Salant and A. E. Livingston; Influence of iodine and sodium iodid on the circulation; *Amer. Jour. Physiolog.,* August, 234.

R. Sheehan, U. S. N.; Malingering in mental disease; U. S. Naval Med. Bull., October, 646. Also, Case of progressive neural muscular atrophy; *Jour. A. M. A.,* Sept. 2, 743.

R. W. Shufeldt, U. S. A.; Hermaphroditism in the human species; *Alienist and Neurol.,* August.

C. A. Simpson; Roentgenray treatment of exophthalmic goiter; *South. Med. Jour.,* October, 857. Also, Report of case of lichen planus; *Va. Med. Semi-Mo.,* Sept. 8, 281.

I. S. Stone; Lessened fertility of women, especially American women; *Amer. Jour. Obst.,* September, 454.

R. Y. Sullivan; Indications for and advisability of artificial sterilization; *ibid.,* 458.

E. A. Sweet, P. H. S.; Sanitation of railway coaches; *Va. Med. Semi-Mo.,* Aug. 25; 235.

J. H. Taylor; Taking footprints without ink; *Jour. A. M. A.,* Aug. 26, 676.

J. L. Thompson; Abortion; *Va. Med. Semi-Mo.,* Aug. 25, 250.

E. B. Vedder, U. S. A.; Etiology and prevention of beriberi; *Mil. Surg.,* October, 368. Also, Dietary deficiency as etiologic factor in pellagra; *Archiv. Intern. Med.,* August, 137; abstract in *Jour. A. M. A.,* Sept. 2, 770.

Carl Voegtlin; The importance of vitamines in relation to nutrition in health and disease; *Wash. Acad. Sciences,* Oct. 4, 575.

J. S. Wall; The scope of infant welfare work; *Va. Med. Semi-Mo.,* Sept. 22, 287.

B. S. Warren; Health insurance in relation to national health; *Jour. A. M. A.,* Sept. 30, 1015.

W. A. White; Meaning of mental hygiene movement; *Bost. Med. and Surg. Jour.,* Aug. 24, 264.

M. I. Wilbert, P. H. S.; Present day control of drugs and medicines; Reprint 355, from Public Health Reports, Aug. 4.

R. R. Williams and A. Seidell; Chemical nature of vitamines; isomerism in natural anti-neuritic substances; *Jour. Biol. Chem.,* September, 431; abstract in *Jour. A. M. A.,* Oct. 7, 1114.

W. C. Woodward, and B. S. Warren, P. H. S.; Health insurance; Reprint 352 from Pub. Hlth. Reports, July 21.

Proceedings of Med. and Surg. Society, D. C., in *Va. Med. Semi-Mo.,* Oct. 27, 355.

PERSONAL NOTES.

Rufus R. Bermann, son of Dr. Isidor Bermann of this Society, was drowned in the North River September 22.

Jesse Coe, age 17, son of Ada B. and the late Dr. Anton Coe, died October 7.

Dr. J. D. Gatewood, Medical Director, U. S. Navy, has been ordered to duty in the Bureau of Medicine and Surgery, Navy Department.

Dr. H. H. Hazen gave a lecture on Skin Cancer, illustrated,

before the Medical Society of Monroe County, N. Y., October 17; a dinner was given in his honor.

Mrs. Sylvania A. Hoadley, widow of the late Dr. A. M. Hoadley of this Society, died at Phoebus, Va., September 28.

Dr. Lincoln Humphreys, U. S. Navy, has been ordered for duty to the Naval Hospital in this city.

Dr. R. M. Kennedy, Medical Inspector, U. S. Navy, has been placed in charge of the Naval Hospital in this city.

Dr. R. S. Lamb has passed the examination in ophthalmology by the committee of the American Board and has been given a certificate.

Mrs. Aietta LeMerle, mother of Dr. E. L. LeMerle of this Society, died in this city September 12.

Joseph J. Mundell, son of Dr. J. J. Mundell of this Society, died October 7.

Dr. Benjamin Newhouse of this Society was married, September 10, to Miss Esther Raum.

Dr. Lester Neuman has removed to 1624 I St. N. W., and will devote himself to Internal Medicine and Clinical Pathology.

Dr. E. H. H. Old, Surgeon, U. S. Navy, has been transferred from the Naval Medical School to the Solace.

Dr. J. C. Pryor, Surgeon, U. S. Navy, has been ordered to the Naval Medical School.

Dr. C. E. Riggs, Surgeon, U. S. Navy, has been ordered for duty to the Washington Navy Yard.

Mrs. Florence R. Stone, widow of the late Dr. Charles G. Stone of this Society, died September 5, in this city.

Dr. J. W. Schereschewsky, P. H. S., attended the meeting of the Medical Society of Pennsylvania at Scranton September 18 to 21, and took part in discussions.

Dr. E. R. Stitt, Medical Director, U. S. Navy, has been placed in command of the Naval Medical School.

Dr. D. G. Sutton, Passed Asst. Surgeon, U. S. Navy, has been ordered to duty at the Naval Medical School.

Dr. Edwin Robert Wiese of this city was married, October 11, to Miss Elizabeth Louise Elterich of Pittsburgh, Pa.

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